



Shawn Lee
HES Manager, Richmond Refinery

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BAY AREA AIR QUALITY
MANAGEMENT DISTRICT

July 30, 2018

Mr. Wayne Kino
Director of Compliance and Enforcement
Bay Area Air Quality Management District
375 Beale Street, Suite 600
San Francisco, California 94105
Attn: Title V Reports

Six-month Deviation Summary and Six-month Monitoring Report

Submittal by Chevron Richmond Refinery (Plant #0010)

For the Period of January 1, 2018 to June 30, 2018

Dear Mr. Kino:

Attached are the Chevron Six-month Deviation Summary Report, and the Six-month Monitoring Report for January through June 2018, which meets the requirements of the Title V Permit Standard Condition I. F. and 40 CFR 70.6 as described in the BAAQMD correspondence from Steve Hill to Jim Whiteside dated January 8, 2004.

For questions, please contact Mr. Carlos Perez at (510) 242-4405.

Sincerely,

Shawn Lee

Attachment

**BAAQMD Title V Permit
6 Month Deviation Summary Report**

From 1/1/2018 to 6/30/2018

A0010 Chevron Richmond Refinery

Facility Address:

841 Chevron Way

Mailing Address

PO Box 1272

City: Richmond

State: CA

Zip Code: 94801

City: Richmond

State: CA

Zip Code: 94802-0272

Contact: Katie Gong

Title: Compliance Technician

Phone: (510) 242-1930

Title V deviations for the reporting period are summarized below:

Event Started: 12/31/2004 11:59 PM

Stopped: _____

☒ Ongoing Event

Discovered On: 1/10/2005

Source Number: _____

Abatement Device : _____

Emission Point: _____

May have resulted in a violation of :

Permit: Title V Permit, Table II.A.3

AQMD: _____

Other: _____

Event Description:

REVISED NOTIFICATION to reflect date & time change: The throughput limit for the Chevron Refinery Long Wharf contained in Table II A 3 (Grandfathered Sources) of the refinery's Title V permit are new limits -- they did not exist before December 1, 2003 (the date the refinery's Title V permit was issued). To determine compliance with the annual throughput limits listed in Table II A 3, the District directed that Chevron sum the total throughput for each of the twelve months preceding the calculation date. Table II A 3 includes a 12-month throughput limit of 146,628,000 bbls for the sum of all 6 berths - S-9321, -9322, -9323, -9324, -9325 and -9326. As of January 1, 2005 the actual total throughput of these sources for the previous 12 months was approximately 148,340,000 bbls. Accordingly, based on data for the months January 2004 through December 2004, on January 10, 2005 Chevron determined that these sources exceeded their annual throughput limit listed in Table II A 3 of the refinery's Title V permit.

Pursuant to Standard Condition I.J.2 of the refinery's Title V permit, Chevron is required to report to the District any exceedance of a limit in Table II A 3. Such notice is for reporting purposes only -- it is not an indication of non-compliance with the refinery's Title V permit.

Probable Cause:

Corrective actions or preventative steps taken:

The refinery has been operating at higher rates in order to meet the increased public demand for refined products, i.e., gasoline, diesel fuel and jet fuel. The refinery's feedstocks and incremental production are both handled at the Long Wharf. The 12-month throughput limit in the Title V Permit was artificially imposed and did not reflect the "as built" capabilities of the systems. No modifications have been made since February, 2000 that affected the wharf's throughput capabilities.

Chevron has reported this to the District as required by the Title V permit.

Event Started: 7/1/2005
Stopped: ☒ Ongoing Event
Discovered On: 7/1/2005

Source Number: S1491
Abatement Device :
Emission Point: _____

May have resulted in a violation of :
Permit: Title V permit, Table II A 3
AQMD: _____
Other: _____

Event Description: REVISED: The throughput limit for the Chevron Refinery Tank 1491 (S#1491) contained in Table II A 3 (Grandfathered Sources) of the Refinery's Title V permit are new limits - they did not exist before December 1, 2003 (the date the refinery's Title V permit was issued). Table II A 3 includes a 12-month throughput limit of 1,093,160 bbls for 1491 Tank. As of July 31, 2006 the actual total throughput of this source for the previous 12 months was approximately 1,137,815 bbls. Accordingly, based on data for the months August 2005 through July 2006, Chevron determined that this source exceeded its annual throughput limit listed in Table II A 3 of the Refinery's Title V permit. Pursuant to Standard Condition I.J.2 of the Refinery's Title V permit, Chevron is required to report to the District any exceedance of a limit in Table II A 3. Such notice is for reporting purposes only - it is not an indication of non-compliance with the Refinery's Title V permit.

Probable Cause: T-3073 received gasoline components from two process units and the refinery decided to divert one of these streams to T-1491 (S-1491). T-1491 has contained a number of gasoline components during its life. Although no change occurred with plant operation or capacity, the diverted stream caused an increase in throughput to be seen by T-1491. Immediately prior to its current service, T-1491 contained MTBE/TAME which was the basis for the Title V grandfathered throughput limit. The throughput of the current process stream to T-1491 is much greater than the throughput of MTBE/TAME. No modifications have been made which affect T-1491's throughput capabilities and no modifications were made which enabled the change in service.

Chevron will continue to report this to the District as required by the Title V permit.

Event Started: 11/23/2006 3:00 AM
Stopped: ☒ Ongoing Event
Discovered On: 12/4/2006

Source Number: S1688
Abatement Device :
Emission Point: _____

May have resulted in a violation of :
Permit: Title V Permit Table II A.3
AQMD: _____
Other: _____

Event Description: The throughput limits for T1688 contained in Table II A 3 (Grandfathered Sources) of the refinery's Title V permit are new limits -- they did not exist before December 1, 2003 (the date the refinery's Title V permit was issued). To determine compliance with the annual throughput limits listed in Table II A 3, the District directed that Chevron sum the total throughput for each of the twelve months preceding the calculation date. Table II A 3 includes an annual throughput limit of 5,059,000 bbl. for S-1688. As of December 1, 2006 the actual throughput of S-1688 for the past 12 months was 5,206,861 bbl. Accordingly, based on data for the months December 2005 through November 2006, on December 1, 2006, Chevron determined that S-1688 exceeded its annual throughput limit listed in Table II A 3 of the refinery's Title V permit.

Pursuant to Standard Condition I.J.2 of the refinery's Title V permit, Chevron is required to report to the District any exceedance of a limit in Table II A 3. Such notice is for reporting purposes only -- it is not an indication of non-compliance with the refinery's Title V permit.

Probable Cause: The grandfathered limit was established using the highest documented throughput for the tank which was not appropriate since design capacity would provide a higher throughput limit. This tank has not been part of any activity with NSR implications.
Corrective actions or preventative steps taken: According to Standard Condition J-2 of our Title V permit, this throughput limit is for reporting purposes only. We are reporting this exceedance consistent with this permit condition.

Event Started: 3/31/2007 11:59 PM
Stopped: ☐ Ongoing Event
Discovered On: 4/2/2007

Source Number: S3071
Abatement Device: _____
Emission Point: _____

May have resulted in a violation of :
Permit: Title V Permit Table II.A.3
AQMD: _____
Other: _____

Event Description:

The throughput limits for T3071 contained in Table II A.3 (Grandfathered Sources) of the refinery's Title V permit are new limits -- they did not exist before December 1, 2003 (the date the refinery's Title V permit was issued). To determine compliance with the annual throughput limits listed in Table II A.3, the District directed that Chevron sum the total throughput for each of the twelve months preceding the calculation date. Table II A.3 includes an annual throughput limit of 8,560,287 bbl. for S-3071. As of March 31, 2007, the actual throughput of S-3071 for the past 12 months was 8,776,309 bbl. Accordingly, based on data for the months April, 2006 through March 2007, on April 2, 2006, Chevron determined that S-3071 exceeded its annual throughput limit listed in Table II A.3 of the refinery's Title V permit.

Pursuant to Standard Condition J.2 of the refinery's Title V permit, Chevron is required to report to the District any exceedance of a limit in Table II A.3. Such notice is for reporting purposes only -- it is not an indication of non-compliance with the refinery's Title V permit.

Probable Cause:

Corrective actions or

preventative steps taken:

The grandfathered limit was established using the highest documented throughput for the tank which was not appropriate since design capacity would provide a higher throughput limit. This tank has not been part of any activity with NSR implications.

According to Standard Condition J-2 of our Title V permit, this throughput limit is for reporting purposes only. We are reporting this exceedance consistent with this permit condition.

Event Started: 4/1/2008 12:00 AM
Stopped: _____
Discovered On: 4/1/2008 ☒ Ongoing Event

Source Number: S3104
Abatement Device: _____
Emission Point: _____

May have resulted in a violation of :
Permit: _____
AQMD: _____
Other: _____

Event Description:

The throughput limits for T3104 contained in Table II A.3 (Grandfathered Sources) of the refinery's Title V permit are new limits -- they did not exist before December 1, 2003 (the date the refinery's Title V permit was issued). To determine compliance with the annual throughput limits listed in Table II A.3, the District directed that Chevron sum the total throughput for each of the twelve months preceding the calculation date. Table II A.3 includes an annual throughput limit of 22,676,000 bbls. for S-3104. As of March 31, 2007, the actual throughput of S-3104 for the past 12 months was 22,752,328 bbls. Accordingly, based on data for the months of April 2007 through March 2008, on April 1, 2008, Chevron determined that S-3104 exceeded its annual throughput limit listed in Table II A.3 of the refinery's Title V permit.

Pursuant to Standard Condition J.2 of the refinery's Title V permit, Chevron is required to report to the District any exceedance of a limit in Table II A.3. Such notice is for reporting purposes only -- it is not an indication of non-compliance with the refinery's Title V permit.

Probable Cause:

Corrective actions or
preventative steps taken:

The grandfathered limit was established using the highest documented throughput for the tank which was not appropriate since design capacity would provide a higher throughput limit. This tank has not been part of any activity with NSR implications.

According to Standard Condition J-2 of our Title V permit, this throughput limit is for reporting purposes only. We are reporting this exceedance consistent with this permit condition.

Event Started: 4/30/2008 11:59 PM
Stopped: ☐ Ongoing Event
Discovered On: 5/1/2008

Source Number: S3072
Abatement Device:
Emission Point:

May have resulted in a violation of :
Permit: Title V Permit Table II A 3
AQMD:
Other:

Event Description:

The throughput limits for T3072 contained in Table II A 3 (Grandfathered Sources) of the refinery's Title V permit are new limits -- they did not exist before December 1, 2003 (the date the refinery's Title V permit was issued). To determine compliance with the annual throughput limits listed in Table II A 3, the District directed that Chevron sum the total throughput for each of the twelve months preceding the calculation date. Table II A 3 includes an annual throughput limit of 2,979,200 bbl. for S-3072. As of April 30, 2008 the actual throughput of S-3072 for the past 12 months was 2,987,253 bbl. Accordingly, based on data for the months May, 2007 through April 2008, on May 1, 2008, Chevron determined that S-3072 exceeded its annual throughput limit listed in Table II A 3 of the refinery's Title V permit.

Pursuant to Standard Condition J.2 of the refinery's Title V permit, Chevron is required to report to the District any exceedance of a limit in Table II A 3. Such notice is for reporting purposes only -- it is not an indication of non-compliance with the refinery's Title V permit.

Probable Cause:

The grandfathered limit was established using the highest documented throughput for the tank which was not appropriate since design capacity would provide a higher throughput limit. This tank has not been part of any activity with NSR implications.

Corrective actions or preventative steps taken:

According to Standard Condition J-2 of our Title V permit, this throughput limit is for reporting purposes only. We are reporting this exceedance consistent with this permit condition.

Event Started: 6/30/2008 11:59 PM
Stopped: ☒ Ongoing Event
Discovered On: 7/7/2008

Source Number: S1504
Abatement Device:
Emission Point:

May have resulted in a violation of :
Permit:
AQMD:
Other:

Event Description:

The throughput limits for T1504 contained in Table II A 3 (Grandfathered Sources) of the refinery's Title V permit are new limits -- they did not exist before December 1, 2003 (the date the refinery's Title V permit was issued). To determine compliance with the annual throughput limits listed in Table II A 3, the District directed that Chevron sum the total throughput for each of the twelve months preceding the calculation date. Table II A 3 includes an annual throughput limit of 602,132 bbls. for S-1504. As of June 30, 2008, the actual annual throughput limit of S-1504 for the past twelve months was 609,294 bbls. Accordingly, based on data for the months of July 2007 through June 2008, on July 7, 2008, Chevron determined that S-1504 exceeded its annual throughput limit listed in Table II A 3 of the refinery's Title V permit.

Pursuant to Standard Condition J.2 of the refinery's Title V permit, Chevron is required to report to the District any exceedance of a limit in Table II A 3. Such notice is for reporting purposes only -- it is not an indication of non-compliance with the refinery's Title V permit.

Probable Cause:

The grandfathered limit was established using the highest documented throughput for the tank which was not appropriate since design capacity would provide a higher throughput limit. This tank has not been part of any activity with NSR implications.

According to Standard Condition J-2 of our Title V permit, this throughput limit is for reporting purposes only. We are reporting this exceedance consistent with this permit condition.

Event Started: 1/31/2009 11:59 PM
Stopped: _____
Discovered On: 2/3/2009 ☒ Ongoing Event

Source Number: S1491
Abatement Device : _____
Emission Point: _____

May have resulted in a violation of :
Permit: Title V Permit Table II.A.3
AQMD: _____
Other: _____

Event Description: The throughput limits for T-1491 contained in Table II A 3 (Grandfathered Sources) of the refinery's Title V permit are new limits - they did not exist before December 1, 2003 (the date the refinery's Title V permit was issued). To determine compliance with the annual throughput limits listed in Table II A 3, the District directed that Chevron sum the total throughput for each of the twelve months preceding the calculation date. Table II A 3 includes an annual throughput limit of 1,093,160 bbls. For S-1491. As of January 31, 2009, the actual throughput of S-1491 for the past 12 months was 1,119,918 bbls. Accordingly, based on data for the months of February 2008 through January 2009, on February 3, 2009, Chevron determined that S-1491 exceeded its annual throughput limit in Table II A 3 of the refinery's Title V permit.

Pursuant to Standard Condition J-2 of the refinery's Title V permit, Chevron is required to report to the District any exceedance of a limit in Table II A 3. Such notice is for reporting purposes only - it is not an indication of non-compliance with the refinery's Title V permit.

Probable Cause: The grandfathered limit was established using the highest documented throughput for the tank which was not appropriate since design capacity would provide a higher throughput limit. This tank has not been part of any activity with NSR implications

Corrective actions or preventative steps taken: According to Standard Condition J-2 of our Title V permit, this limit is for reporting purposes only. We are reporting this exceedance consistent with this permit condition. ****Already in system. ****

Event Started: 5/20/2016 7:00 AM
Stopped: _____
Discovered On: 5/23/2016 ☒ Ongoing Event

Source Number: S4285
Abatement Device : A0014
Emission Point: _____

May have resulted in a violation of :
Permit: PC #11066 part 7A5
AQMD: _____
Other: _____

Event Description: Beginning on May 20, 2016 the FCC electrostatic precipitator (ESP) has begun operating intermittently in a state of deviation with Title V permit condition 11066 part 7(A5) following the commencement of the Refinery's ammonia optimization and demonstration testing protocol per Regulation 6 Rule 5. Per the Air District's approval and direction given on April 12, 2016, the test protocol is conducted under the Air District's Trial Testing Policy and this report is being submitted to capture all potential deviations with the above mentioned permit condition as a result of implementing the testing protocol.

UPDATE:
On June 27, 2017, the BAAQMD agreed to allow the Chevron Richmond Refinery to continue trial testing under the Refinery's Ammonia Optimization and Demonstration Testing Protocol. Per the agreement, the BAAQMD will extend enforcement relief and permit the Refinery to operate outside the requirements of the Title V Permit Condition 11066 #3A, 3B, 3C, 7A, and 7A5 (and potentially other parts of the permit condition) until issuance of the final ammonia emissions limit. The Refinery will continue to capture all potential deviations as a result of implementing the testing protocol.

Probable Cause: Due to the ongoing FCC stack ammonia optimization testing protocol, the Refinery deviated from BAAQMD permit condition #11066 part 7A5 on the following dates.

Corrective actions or preventative steps taken:

May:

- May 20, 2016 at 07:00 hrs to May 21, 2016 at 03:00 hrs
- May 21, 2016 at 06:00 hrs to May 23, 2016 at 07:00 hrs
- May 25, 2016 at 20:00 hrs to May 26, 2016 at 00:00 hrs
- May 26, 2016 at 18:00 hrs to May 27, 2016 at 00:00 hrs
- May 27, 2016 at 08:00 hrs to May 27, 2016 at 10:00 hrs
- May 28, 2016 at 09:00 hrs to May 28, 2016 at 11:00 hrs
- May 28, 2016 at 21:00 hrs to May 28, 2016 at 22:00 hrs
- May 31, 2016 at 21:00 hrs to May 31, 2016 at 22:00 hrs

June:

- June 6, 2016 at 10:00 hrs to June 6, 2016 at 14:00 hrs
- June 10, 2016 at 20:00 hrs to June 10, 2016 at 21:00 hrs
- June 14, 2016 at 22:00 hrs to June 15, 2016 at 01:00 hrs
- June 15, 2016 at 07:00 hrs to June 15, 2016 at 08:00 hrs
- June 15, 2016 at 12:00 hrs to June 15, 2016 at 19:00 hrs
- June 15, 2016 at 22:00 hrs to June 15, 2016 at 23:00 hrs
- June 16, 2016 at 09:00 hrs to June 17, 2016 at 08:00 hrs
- June 17, 2016 at 20:00 hrs to June 18, 2016 at 09:00 hrs
- June 18, 2016 at 22:00 hrs to June 19, 2016 at 01:00 hrs
- June 20, 2016 at 17:00 hrs to June 25, 2016 at 12:00 hrs
- June 25, 2016 at 20:00 hrs to June 26, 2016 at 11:00 hrs
- June 26, 2016 at 18:00 hrs to June 26, 2016 at 21:00 hrs
- June 27, 2016 at 03:00 hrs to June 27, 2016 at 04:00 hrs
- June 27, 2016 at 05:00 hrs to June 27, 2016 at 11:00 hrs
- June 28, 2016 at 05:00 hrs to June 28, 2016 at 08:00 hrs
- June 28, 2016 at 20:00 hrs to June 29, 2016 at 02:00 hrs
- June 29, 2016 at 19:00 hrs to June 30, 2016 at 12:00 hrs
- June 30, 2016 at 19:00 hrs to July 1, 2016 at 00:00 hrs

July:

- July 1, 2016 at 00:00 hrs to July 1, 2016 at 02:00 hrs
- July 2, 2016 at 09:00 hrs to July 2, 2016 at 10:00 hrs
- July 3, 2016 at 02:00 hrs to July 3, 2016 at 15:00 hrs
- July 4, 2016 at 08:00 hrs to July 4, 2016 at 16:00 hrs
- July 4, 2016 at 22:00 hrs to July 5, 2016 at 00:00 hrs
- July 5, 2016 at 00:00 hrs to July 5, 2016 at 09:00 hrs
- July 6, 2016 at 09:00 hrs to July 6, 2016 at 15:00 hrs
- July 6, 2016 at 18:00 hrs to July 7, 2016 at 00:00 hrs
- July 7, 2016 at 00:00 hrs to July 7, 2016 at 08:00 hrs
- July 7, 2016 at 10:00 hrs to July 7, 2016 at 13:00 hrs

August:

- August 5, 2016 at 06:00 hrs to August 5, 2016 at 07:00 hrs
- August 5, 2016 at 10:00 hrs to August 5, 2016 at 14:00 hrs
- August 8, 2016 at 12:00 hrs to August 8, 2016 at 16:00 hrs
- August 12, 2016 at 21:00 hrs to August 12, 2016 at 22:00 hrs
- August 16, 2016 at 23:00 hrs to August 17, 2016 at 00:00 hrs
- August 17, 2016 at 22:00 hrs to August 18, 2016 at 00:00 hrs
- August 22, 2016 at 11:00 hrs to August 18, 2016 at 13:00 hrs
- August 23, 2016 at 20:00 hrs to August 23, 2016 at 21:00 hrs
- August 26, 2016 at 12:00 hrs to August 26, 2016 at 13:00 hrs
- August 26, 2016 at 20:00 hrs to August 26, 2016 at 21:00 hrs
- August 29, 2016 at 09:00 hrs to August 29, 2016 at 12:00 hrs
- August 29, 2016 at 13:00 hrs to August 29, 2016 at 15:00 hrs
- August 30, 2016 at 17:00 hrs to August 30, 2016 at 23:00 hrs
- August 31, 2016 at 07:00 hrs to September 1, 2016 at 00:00 hrs

September:

- September 1, 2016 at 00:00 hrs to September 1, 2016 at 02:00 hrs
- September 1, 2016 at 03:00 hrs to September 1, 2016 at 07:00 hrs
- September 1, 2016 at 08:00 hrs to September 1, 2016 at 22:00 hrs
- September 3, 2016 at 17:00 hrs to September 5, 2016 at 21:00 hrs
- September 6, 2016 at 03:00 hrs to September 7, 2016 at 20:00 hrs
- September 8, 2016 at 06:00 hrs to September 8, 2016 at 21:00 hrs
- September 9, 2016 at 00:00 hrs to September 9, 2016 at 21:00 hrs
- September 10, 2016 at 00:00 hrs to September 10, 2016 at 17:00 hrs
- September 18, 2016 at 08:00 hrs to September 18, 2016 at 15:00 hrs
- September 20, 2016 at 02:00 hrs to September 20, 2016 at 14:00 hrs
- September 20, 2016 at 20:00 hrs to September 21, 2016 at 15:00 hrs
- September 21, 2016 at 21:00 hrs to September 24, 2016 at 00:00 hrs
- September 24, 2016 at 03:00 hrs to September 25, 2016 at 21:00 hrs
- September 26, 2016 at 02:00 hrs to September 27, 2016 at 16:00 hrs
- September 27, 2016 at 19:00 hrs to September 30, 2016 at 04:00 hrs
- September 30, 2016 at 05:00 hrs to September 30, 2016 at 10:00 hrs
- September 30, 2016 at 16:00 hrs to October 1, 2016 at 00:00 hrs

October:

- October 1, 2016 at 00:00 hrs to October 4, 2016 at 22:00 hrs
- October 4, 2016 at 23:00 hrs to October 7, 2016 at 21:00 hrs
- October 8, 2016 at 05:00 hrs to October 13, 2016 at 19:00 hrs
- October 13, 2016 at 23:00 hrs to October 15, 2016 at 07:00 hrs
- October 15, 2016 at 09:00 hrs to October 17, 2016 at 01:00 hrs
- October 17, 2016 at 09:00 hrs to October 21, 2016 at 18:00 hrs

- October 22, 2016 at 00:00 hrs to October 22, 2016 at 21:00 hrs
- October 23, 2016 at 00:00 hrs to October 23, 2016 at 06:00 hrs
- October 23, 2016 at 10:00 hrs to October 24, 2016 at 20:00 hrs
- October 24, 2016 at 22:00 hrs to October 25, 2016 at 20:00 hrs
- October 25, 2016 at 22:00 hrs to October 26, 2016 at 19:00 hrs
- October 26, 2016 at 21:00 hrs to October 30, 2016 at 00:00 hrs
- October 30, 2016 at 03:00 hrs to October 31, 2016 at 19:00 hrs

November:

- November 1, 2016 at 03:00 hours to November 2, 2016 at 10:00 hours
- November 2, 2016 at 13:00 hours to November 11, 2016 at 19:00 hours
- November 11, 2016 at 20:00 hours to November 22, 2016 at 09:00 hours
- November 22, 2016 at 19:00 hours to December 1, 2016 at 00:00 hours

December:

- December 1, 2016 at 00:00 hrs to December 6, 2016 at 08:00 hrs
- December 6, 2016 at 10:00 hrs to December 7, 2016 at 08:00 hrs
- December 7, 2016 at 10:00 hrs to December 7, 2016 at 22:00 hrs
- December 8, 2016 at 07:00 hrs to December 9, 2016 at 16:00 hrs
- December 10, 2016 at 00:00 hrs to December 10, 2016 at 17:00 hrs
- December 10, 2016 at 20:00 hrs to December 16, 2016 at 07:00 hrs
- December 16, 2016 at 08:00 hrs to December 18, 2016 at 02:00 hrs
- December 18, 2016 at 05:00 hrs to January 1, 2016 at 00:00 hrs

January 2017:

- January 1, 2017 at 00:00 hours to January 26, 2017 at 20:00 hours
- January 27, 2017 at 00:00 hours to January 31, 2017 at 12:00 hours
- January 31, 2017 at 14:00 hours to January 31, 2017 at 16:00 hours
- January 31, 2017 at 19:00 hours to February 1, 2017 at 00:00 hours

February 2017:

- February 1, 2017 at 00:00 hours to February 26, 2017 at 19:00 hours
- February 27, 2017 at 00:00 hours to February 28, 2017 at 23:00 hours

March 2017:

- March 1, 2017 at 00:00 hours to March 2, 2017 at 01:00
- March 2, 2017 at 06:00 hours to March 4, 2017 at 13:00
- March 4, 2017 at 15:00 hours to March 10, 2017 at 00:00
- March 10, 2017 at 06:00 hours to March 10, 2017 at 22:00
- March 11, 2017 at 00:00 hours to March 25, 2017 at 05:00
- March 25, 2017 at 10:00 hours to March 25, 2017 at 12:00
- March 25, 2017 at 15:00 hours to March 25, 2017 at 16:00
- March 25, 2017 at 19:00 hours to March 26, 2017 at 01:00
- March 26, 2017 at 10:00 hours to March 26, 2017 at 11:00
- March 26, 2017 at 12:00 hours to March 26, 2017 at 15:00
- March 26, 2017 at 21:00 hours to March 28, 2017 at 17:00
- March 28, 2017 at 18:00 hours to March 31, 2017 at 22:00

April 2017:

- April 1, 2017 at 00:00 hours to April 1, 2017 at 03:00
- April 1, 2017 at 07:00 hours to April 1, 2017 at 20:00
- April 1, 2017 at 22:00 hours to April 2, 2017 at 21:00
- April 3, 2017 at 01:00 hours to April 3, 2017 at 18:00
- April 4, 2017 at 09:00 hours to April 6, 2017 at 16:00

- April 6, 2017 at 19:00 hours to April 9, 2017 at 22:00
- April 10, 2017 at 01:00 hours to April 10, 2017 at 18:00
- April 10, 2017 at 22:00 hours to April 13, 2017 at 22:00
- April 14, 2017 at 04:00 hours to April 14, 2017 at 20:00
- April 15, 2017 at 00:00 hours to April 16, 2017 at 11:00
- April 16, 2017 at 14:00 hours to April 19, 2017 at 16:00
- April 19, 2017 at 20:00 hours to April 20, 2017 at 09:00
- April 20, 2017 at 10:00 hours to April 24, 2017 at 06:00
- April 24, 2017 at 08:00 hours to April 26, 2017 at 18:00
- April 26, 2017 at 20:00 hours to April 27, 2017 at 17:00
- April 27, 2017 at 21:00 hours to April 29, 2017 at 21:00
- April 29, 2017 at 23:00 hours to May 1, 2017 at 00:00

May 2017

- May 1, 2017 at 00:00 hours to May 7, 2017 at 19:00
- May 7, 2017 at 23:00 hours to May 9, 2017 at 19:00
- May 9, 2017 at 22:00 hours to May 10, 2017 at 13:00
- May 10, 2017 at 14:00 hours to May 10, 2017 at 21:00
- May 12, 2017 at 10:00 hours to May 13, 2017 at 18:00
- May 13, 2017 at 21:00 hours to May 16, 2017 at 00:00
- May 16, 2017 at 10:00 hours to May 16, 2017 at 14:00
- May 16, 2017 at 18:00 hours to May 17, 2017 at 06:00
- May 17, 2017 at 08:00 hours to May 17, 2017 at 11:00
- May 17, 2017 at 22:00 hours to May 19, 2017 at 04:00
- May 19, 2017 at 07:00 hours to May 19, 2017 at 20:00
- May 19, 2017 at 21:00 hours to May 21, 2017 at 18:00
- May 21, 2017 at 21:00 hours to May 23, 2017 at 16:00
- May 23, 2017 at 22:00 hours to May 27, 2017 at 05:00
- May 27, 2017 at 13:00 hours to May 29, 2017 at 01:00
- May 29, 2017 at 13:00 hours to May 29, 2017 at 18:00
- May 29, 2017 at 19:00 hours to May 30, 2017 at 02:00
- May 30, 2017 at 10:00 hours to June 1, 2017 at 00:00

June 2017

- June 1, 2017 at 00:00 hours to June 2, 2017 at 20:00
- June 3, 2017 at 00:00 hours to June 12, 2017 at 11:00
- June 12, 2017 at 13:00 hours to June 13, 2017 at 07:00
- June 13, 2017 at 16:00 hours to June 17, 2017 at 01:00
- June 17, 2017 at 12:00 hours to June 18, 2017 at 06:00
- June 18, 2017 at 13:00 hours to June 19, 2017 at 12:00
- June 19, 2017 at 13:00 hours to June 23, 2017 at 15:00
- June 23, 2017 at 22:00 hours to June 24, 2017 at 18:00
- June 24, 2017 at 20:00 hours to June 26, 2017 at 02:00
- TR sets were shutdown from June 24, 2017 2050 hours; RCA # 07D72
- June 26, 2017 at 16:00 hours to June 26, 2017 at 22:00
- June 27, 2017 at 03:00 hours to June 27, 2017 at 13:00
- June 28, 2017 at 01:00 hours to July 1, 2017 at 00:00

July 2017

- July 1, 2017 at 00:00 hours to July 7, 2017 at 22:00 hours
- July 8, 2017 at 07:00 hours to July 8, 2017 at 09:00 hours
- July 8, 2017 at 21:00 hours to July 9, 2017 at 23:00 hours
- July 10, 2017 at 00:00 hours to July 10, 2017 at 15:00 hours
- July 10, 2017 at 18:00 hours to July 12, 2017 at 12:00 hours

- July 12, 2017 at 14:00 hours to July 12, 2017 at 22:00 hours
- July 13, 2017 at 03:00 hours to July 14, 2017 at 00:00 hours
- July 14, 2017 at 10:00 hours to July 15, 2017 at 00:00 hours
- July 15, 2017 at 12:00 hours to July 15, 2017 at 20:00 hours
- July 16, 2017 at 00:00 hours to July 16, 2017 at 2:00 hours
- July 16, 2017 at 0800 hours to July 16, 2017 at 11:00 hours
- July 16, 2017 at 14:00 hours to July 16, 2017 at 23:00 hours
- July 17, 2017 at 04:00 hours to July 17, 2017 at 11:00 hours
- July 18, 2017 at 01:00 hours to July 19, 2017 at 23:00 hours
- July 20, 2017 at 13:00 hours to July 21, 2017 at 02:00 hours
- July 21, 2017 at 12:00 hours to July 22, 2017 at 23:00 hours
- July 23, 2017 at 14:00 hours to July 23, 2017 at 17:00 hours
- July 24, 2017 at 02:00 hours to July 24, 2017 at 07:00 hours
- July 24, 2017 at 11:00 hours to July 24, 2017 at 13:00 hours
- July 24, 2017 at 16:00 hours to July 24, 2017 at 20:00 hours
- July 25, 2017 at 07:00 hours to July 25, 2017 at 08:00 hours
- July 25, 2017 at 12:00 hours to July 25, 2017 at 23:00 hours
- July 26, 2017 at 15:00 hours to July 29, 2017 at 10:00 hours
- July 29, 2017 at 15:00 hours to August 1, 2017 at 00:00 hours

August 2017

- August 1, 2017 at 00:00 hours to August 1, 2017 at 17:00
- August 1, 2017 at 22:00 hours to August 2, 2017 at 15:00
- August 2, 2017 at 18:00 hours to August 3, 2017 at 13:00
- August 3, 2017 at 15:00 hours to August 4, 2017 at 02:00
- August 4, 2017 at 07:00 hours to August 6, 2017 at 07:00
- August 6, 2017 at 14:00 hours to August 13, 2017 at 18:00
- August 13, 2017 at 23:00 hours to August 14, 2017 at 21:00
- August 15, 2017 at 07:00 hours to August 15, 2017 at 10:00
- August 15, 2017 at 14:00 hours to August 15, 2017 at 19:00
- August 15, 2017 at 23:00 hours to August 17, 2017 at 21:00
- August 18, 2017 at 01:00 hours to August 20, 2017 at 16:00
- August 20, 2017 at 19:00 hours to August 20, 2017 at 21:00
- August 21, 2017 at 00:00 hours to August 21, 2017 at 22:00
- August 22, 2017 at 01:00 hours to August 22, 2017 at 12:00
- August 22, 2017 at 14:00 hours to August 22, 2017 at 19:00
- August 23, 2017 at 02:00 hours to August 24, 2017 at 16:00
- August 24, 2017 at 20:00 hours to August 24, 2017 at 21:00
- August 26, 2017 at 07:00 hours to August 27, 2017 at 05:00

September 2017

- September 14, 2017 at 07:00 hours to September 14, 2017 at 10:00 hours
- September 14, 2017 at 12:00 hours to September 14, 2017 at 14:00 hours
- September 16, 2017 at 22:00 hours to September 17, 2017 at 01:00 hours
- September 17, 2017 at 19:00 hours to September 17, 2017 at 22:00 hours
- September 18, 2017 at 08:00 hours to September 18, 2017 at 10:00 hours
- September 18, 2017 at 20:00 hours to September 19, 2017 at 05:00 hours
- September 19, 2017 at 07:00 hours to September 19, 2017 at 14:00 hours
- September 19, 2017 at 19:00 hours to September 19, 2017 at 22:00 hours
- September 22, 2017 at 14:00 hours to September 22, 2017 at 16:00 hours
- September 26, 2017 at 13:00 hours to September 26, 2017 at 18:00 hours
- September 27, 2017 at 08:00 hours to September 27, 2017 at 10:00 hours
- September 27, 2017 at 21:00 hours to September 27, 2017 at 22:00 hours
- September 28, 2017 at 09:00 hours to September 28, 2017 at 10:00 hours

- September 30, 2017 at 09:00 hours to September 30, 2017 at 11:00 hours
- September 30, 2017 at 21:00 hours to September 30, 2017 at 23:00 hours

October 2017

- October 2, 2017 at 11:00 hours to October 2, 2017 at 12:00 hours
- October 2, 2017 at 20:00 hours to October 3, 2017 at 02:00 hours
- October 6, 2017 at 10:00 hours to October 6, 2017 at 11:00 hours
- October 6, 2017 at 21:00 hours to October 6, 2017 at 23:00 hours
- October 7, 2017 at 03:00 hours to October 7, 2017 at 16:00 hours
- October 7, 2017 at 17:00 hours to October 7, 2017 at 22:00 hours
- October 9, 2017 at 00:00 hours to October 9, 2017 at 02:00 hours
- October 9, 2017 at 06:00 hours to October 9, 2017 at 08:00 hours
- October 10, 2017 at 09:00 hours to October 10, 2017 at 10:00 hours
- October 10, 2017 at 20:00 hours to October 10, 2017 at 23:00 hours
- October 11, 2017 at 07:00 hours to October 11, 2017 at 11:00 hours
- October 11, 2017 at 20:00 hours to October 12, 2017 at 11:00 hours
- October 12, 2017 at 14:00 hours to October 13, 2017 at 05:00 hours
- October 14, 2017 at 11:00 hours to October 14, 2017 at 12:00 hours
- October 14, 2017 at 22:00 hours to October 16, 2017 at 23:00 hours (See RCA# 07E90 for excursion notification)
- October 30, 2017 at 15:00 hours to October 30, 2017 at 17:00 hours (See RCA# 07F20 for excursion notification)

November 2017

- None

December 2017

- None

January 2018

- January 15, 2018 at 08:00 hours to January 15, 2018 at 18:00 hours
- January 15, 2018 at 19:00 hours to January 15, 2018 at 22:00 hours
- January 22, 2018 at 13:00 hours to January 22, 2018 at 14:00 hours

February 2018

- February 8, 2018 at 09:00 hours to February 8, 2018 at 12:00 hours
- February 8, 2018 at 14:00 hours to February 10, 2018 at 16:00 hours
- February 16, 2018 at 21:00 hours to February 17, 2018 at 02:00 hours
- February 19, 2018 at 22:00 hours to February 19, 2018 at 23:00 hours
- February 20, 2018 at 19:00 hours to February 20, 2018 at 21:00 hours
- February 21, 2018 at 12:00 hours to February 24, 2018 at 02:00 hours
- February 24, 2018 at 06:00 hours to February 24, 2018 at 12:00 hours
- February 24, 2018 at 19:00 hours to February 25, 2018 at 23:00 hours
- February 26, 2018 at 06:00 hours to March 1, 2018 at 00:00 hours

March 2018

- March 1, 2018 at 00:00 hours to March 3, 2018 at 18:00 hours
- March 3, 2018 at 20:00 hours to March 3, 2018 at 22:00 hours
- March 5, 2018 at 16:00 hours to March 5, 2018 at 21:00 hours
- March 5, 2018 at 22:00 hours to March 5, 2018 at 23:00 hours
- March 6, 2018 at 07:00 hours to March 7, 2018 at 10:00 hours
- March 7, 2018 at 11:00 hours to March 8, 2018 at 02:00 hours
- March 8, 2018 at 19:00 hours to March 9, 2018 at 06:00 hours
- March 9, 2018 at 12:00 hours to March 9, 2018 at 15:00 hours
- March 9, 2018 at 18:00 hours to March 10, 2018 at 02:00 hours
- March 10, 2018 at 06:00 hours to March 10, 2018 at 08:00 hours

- March 10, 2018 at 09:00 hours to March 10, 2018 at 13:00 hours
- March 10, 2018 at 21:00 hours to March 11, 2018 at 00:00 hours
- March 12, 2018 at 07:00 hours to March 12, 2018 at 13:00 hours
- March 12, 2018 at 21:00 hours to March 12, 2018 at 22:00 hours
- March 13, 2018 at 07:00 hours to March 13, 2018 at 11:00 hours
- March 13, 2018 at 18:00 hours to March 14, 2018 at 01:00 hours
- March 14, 2018 at 04:00 hours to March 14, 2018 at 05:00 hours
- March 14, 2018 at 06:00 hours to March 14, 2018 at 15:00 hours
- March 14, 2018 at 18:00 hours to March 15, 2018 at 15:00 hours
- March 16, 2018 at 06:00 hours to March 18, 2018 at 23:00 hours
- March 19, 2018 at 01:00 hours to March 19, 2018 at 04:00 hours
- March 19, 2018 at 05:00 hours to March 19, 2018 at 08:00 hours
- March 19, 2018 at 11:00 hours to March 20, 2018 at 07:00 hours
- March 20, 2018 at 09:00 hours to March 20, 2018 at 13:00 hours
- March 20, 2018 at 20:00 hours to April 1, 2018 at 00:00 hours

April 2018

- April 1, 2018 at 00:00 hours to April 2, 2018 at 04:00 hours
- April 2, 2018 at 14:00 hours to April 3, 2018 at 07:00 hours
- April 3, 2018 at 09:00 hours to April 3, 2018 at 11:00 hours
- April 3, 2018 at 13:00 hours to April 3, 2018 at 15:00 hours
- April 3, 2018 at 18:00 hours to April 11, 2018 at 14:00 hours
- April 11, 2018 at 14:00 hours to April 12, 2018 at 04:00 hours – ESP S/D due to unplanned FCC S/D; Reference RCA # 07G74
- April 12, 2018 at 04:00 hours to April 12, 2018 at 12:00 hours
- April 14, 2018 at 23:00 hours to April 17, 2018 at 17:00 hours – ESP S/D due to unplanned FCC S/D; Reference RCA # 07G76
- April 17, 2018 at 17:00 hours to April 18, 2018 at 06:00 hours
- April 20, 2018 at 20:00 hours to April 20, 2018 at 22:00 hours
- April 21, 2018 at 07:00 hours to April 21, 2018 at 13:00 hours
- April 22, 2018 at 09:00 hours to April 22, 2018 at 10:00 hours
- April 23, 2018 at 21:00 hours to April 24, 2018 at 00:00 hours
- April 25, 2018 at 14:00 hours to April 26, 2018 at 08:00 hours
- April 26, 2018 at 12:00 hours to April 27, 2018 at 10:00 hours

May 2018

- May 9, 2018 at 08:00 hours to May 9, 2018 at 18:00 hours
- May 10, 2018 at 07:00 hours to May 10, 2018 at 16:00 hours
- May 11, 2018 at 09:00 hours to May 11, 2018 at 14:00 hours
- May 11, 2018 at 19:00 hours to May 12, 2018 at 10:00 hours
- May 15, 2018 at 08:00 hours to May 15, 2018 at 10:00 hours
- May 15, 2018 at 14:00 hours to May 16, 2018 at 10:00 hours
- May 16, 2018 at 20:00 hours to May 17, 2018 at 10:00 hours
- May 17, 2018 at 11:00 hours to May 17, 2018 at 13:00 hours
- May 17, 2018 at 21:00 hours to May 18, 2018 at 00:00 hours
- May 18, 2018 at 04:00 hours to May 18, 2018 at 11:00 hours
- May 18, 2018 at 20:00 hours to May 18, 2018 at 08:00 hours
- May 19, 2018 at 09:00 hours to May 25, 2018 at 17:00 hours
- May 26, 2018 at 06:00 hours to May 27, 2018 at 21:00 hours
- May 28, 2018 at 00:00 hours to May 28, 2018 at 10:00 hours
- May 28, 2018 at 11:00 hours to May 28, 2018 at 13:00 hours
- May 28, 2018 at 19:00 hours to May 29, 2018 at 00:00 hours
- May 29, 2018 at 10:00 hours to May 30, 2018 at 21:00 hours
- May 31, 2018 at 00:00 hours to June 1, 2018 at 00:00 hours

June 2018

•June 1, 2018 at 00:00 hours to June 1, 2018 at 14:00 hours
•June 1, 2018 at 20:00 hours to June 2, 2018 at 00:00 hours
•June 2, 2018 at 07:00 hours to June 2, 2018 at 12:00 hours
•June 2, 2018 at 13:00 hours to June 3, 2018 at 10:00 hours
•June 3, 2018 at 13:00 hours to June 5, 2018 at 10:00 hours
•June 5, 2018 at 21:00 hours to June 7, 2018 at 04:00 hours
•June 7, 2018 at 07:00 hours to June 7, 2018 at 22:00 hours
•June 8, 2018 at 06:00 hours to June 8, 2018 at 08:00 hours
•June 8, 2018 at 11:00 hours to June 8, 2018 at 12:00 hours
•June 8, 2018 at 15:00 hours to June 9, 2018 at 09:00 hours
•June 10, 2018 at 02:00 hours to June 11, 2018 at 06:00 hours
•June 11, 2018 at 18:00 hours to June 12, 2018 at 06:00 hours
•June 12, 2018 at 10:00 hours to June 13, 2018 at 00:00 hours
•June 13, 2018 at 15:00 hours to June 13, 2018 at 18:00 hours
•June 13, 2018 at 20:00 hours to June 14, 2018 at 17:00 hours
•June 14, 2018 at 23:00 hours to June 15, 2018 at 02:00 hours
•June 15, 2018 at 04:00 hours to June 18, 2018 at 05:00 hours
•June 18, 2018 at 15:00 hours to June 20, 2018 at 03:00 hours
•June 20, 2018 at 08:00 hours to June 20, 2018 at 09:00 hours
•June 20, 2018 at 12:00 hours to June 20, 2018 at 13:00 hours
•June 20, 2018 at 16:00 hours to June 20, 2018 at 21:00 hours
•June 21, 2018 at 18:00 hours to June 22, 2018 at 20:00 hours
•June 22, 2018 at 23:00 hours to June 30, 2018 at 00:00 hours
•June 30, 2018 at 11:00 hours to June 30, 2018 at 18:00 hours

FCC NH3 Optimization, Reg 6-5, trial testing is being conducted and still ongoing.

Event Started: 1/17/2017 9:07 AM
Stopped: ☐ Ongoing Event
Discovered On: 1/17/2017

Source Number: S4285
Abatement Device :
Emission Point:

May have resulted in a violation of :
Permit:
AQMD:
Other: 40 CFR 63.1564

Event Description: On January 17, 2017 from 0907 hours to 1421 hours, the FCC (S-4285) operated above its limit of 20% opacity for a consecutive 3-hour period. This indicated excess occurred during the Refinery's (BAAQMD 6-5) Ammonia Optimization and Demonstration Testing Protocol. Per the agreement made on April 12, 2016 between the Refinery and the BAAQMD, the test protocol is conducted under the Air District's Trial Testing Policy and this notification is being submitted to capture all potential deviations as a result of implementing the testing protocol.
On June 27, 2017, the BAAQMD agreed to allow the Chevron Richmond Refinery to continue trial testing under the Refinery's Ammonia Optimization and Demonstration Testing Protocol. Per the agreement, the BAAQMD will extend enforcement relief and permit the Refinery to operate outside the requirements of the Title V Permit Condition 11066 #3A, 3B, 3C, 7A, and 7A5 (and potentially other parts of the permit condition) until issuance of the final ammonia emissions limit. The Refinery will continue to capture all potential deviations as a result of implementing the testing protocol.

Probable Cause: Due to the ongoing FCC stack ammonia optimization testing protocol, the Refinery deviated from 40 CFR 63.1564 on the following dates.
Corrective actions or preventative steps taken:
January 2017
January 17, 2017 from 0907 hours to 1421 hours

- February 2017
- None
- March 2017
- None
- April 2017
- None
- May 2017
- None
- June 2017
- None
- July 2017
- None
- August 2017
- None
- September 2017
- None
- October 2017
- None
- November 2017
- None

December 2017
•None

January 2018
•None

February 2018
•None

March 2018
•None

April 2018
•None

May 2018
•None

June 2018
•None

FCC NH3 Optimization, Regulation 6-5, trial testing is being conducted and still ongoing:

Event Started: 3/21/2017
Stopped: ☒ Ongoing Event
Discovered On: 2/5/2018

Source Number: S-4401
Abatement Device: _____
Emission Point: _____

May have resulted in a violation of:
Permit: 26127
AQMD: _____
Other: _____

Event Description: The Ranch Area Maintenance Prime Diesel Engine Generator (S-4401) provides electrical power to the Refinery's Ranch Area Maintenance Yard and is driven by a CARB emissions compliance Cummins Tier 4 diesel engine. On February 5, 2018 it was discovered that S-4401 was exchanged with another unit by the Refinery's on-site equipment rental company.

Probable Cause: The Ranch Maintenance Generator (S-4401) is a 180 kVA generator that provided electrical power to the double and triple wide trailers and to several mobile miniature trailers located at the Refinery's Ranch Area Maintenance Yard. In the first quarter of 2017, the mobile miniature trailers were removed, once the 4th Quarter 2016 Maintenance Shutdown was over, and the 180 kVA unit was no longer the appropriate sized generator for the electrical load. The generator began to have reliability issues and continuously shut down. On March 21, 2017, S-4401 was exchanged for a more suitable sized generator. Chevron maintenance personnel and the Refinery's on-site equipment rental company were not aware that S-4401 was a permitted source under the BAAQMD and could not be exchanged for another unit.

S-4401 is currently on rent with another facility and the Refinery is working with the equipment rental company to have the generator transported back to the Refinery. Temporarily, a Tier 4 compatible generator, with the same emissions specifications is operating in its place.

UPDATE:

March 2018

The Refinery is currently working with the equipment rental company to have the generator transported back to the Refinery as it has been rented out to another facility. A simulated load will be placed on the generator. Long term corrective actions have been assigned to develop a sustainable process to communicate and reinforce engine permit requirements to Refinery stakeholders (e.g. maintenance personnel, on-site equipment rental company). This includes but not limited to signage placed on permitted rentals, and a process for the rental company to flag units in their database that have superseding permit requirements with the BAAQMD.

April 2018

On April 12, 2018 a comparable unit (Tier 4, Cummins 180kVA unit) was temporarily placed in service until S-4401 could be returned to the Refinery. This temporary generator was configured with an assimilated load to help prevent similar operability issues that had occurred with S-4401. Regardless, of the assimilated load, the temporary generator was still not operating with enough load to run reliably causing it to continuously shutdown. It has been determined that the permitted engine S-4401 or a comparable unit is not suitable in this application and can't be returned to service. On May 8, 2018 the temporary generator was replaced with a more appropriately sized generator, a Tier 4F, Cummins 125kVA unit. The Refinery has engaged the District to discuss a path forward.

May 2018

On June 20, 2018 the Refinery and BAAQMD permitting engineer discussed a path forward for the Ranch Area Maintenance Yard Prime Diesel Engine Generator S-4401. As a result of the discussion, it was agreed that if the current generator in use, (Tier 4 125 kVA), does not exceed a diesel exhaust particulate matter (DEPM) emission rate of 0.01 g/kW-hour or a mass rate emission of no greater than 0.00458 pounds per hour, it can operate as S-4401 under Title V Permit Condition # 26684. This will be confirmed by the BAAQMD permitting engineer upon receipt of a Health Risk Screening Analysis (HRSa) form and specification sheet provided by the Refinery for the current generator. In the event there is a need to replace the current generator, the Refinery will submit a permit application for a new source.

June 2018

On June 28, 2018 the Refinery submitted to the BAAQMD the Health Risk Screening Analysis (HRSa) form, the manufacturer specification sheet and the CARB certification for the current generator in use. The Refinery engaged the BAAQMD's permitting engineer on July 20, 2018 and continues to work towards resolving this matter.

Event Started: 3/7/2017
 Stopped: 1/31/2018 ☐ Ongoing Event
 Discovered On: 3/5/2018

Source Number: _____
 Abatement Device : _____
 Emission Point: _____

May have resulted in a violation of :
 Permit: _____
 AQMD: _____
 Other: 40 CFR 63.1575 (k)(2) _____

Event Description: As of February 1, 2016, the Refinery was required to submit performance evaluation test results via the EPA's Electronic Reporting Tool (ERT) within 60 days of completing the test per 63.1575 (k)(1). It was discovered on March 5, 2018 that the performance evaluation results were not submitted as required per 40 CFR 63.1575 (k)(1). The performance evaluation results were submitted to the EPA as required for semi-annual reporting.

UPDATE:

This update is to clarify that the 40 FCC V-65 O2 RATA was not submitted electronically as required per 40 CFR 63.1575 (k)(2). This performance evaluation result was submitted to the EPA on-time via ERT and hard-copy format as required for NSPS semi-annual reporting, however not within 60 days as required under MACT II.

Probable Cause: The Refinery was aware that other performance evaluations were subject to electronic reporting requirements under Refinery MACT II. These tests have been submitted via the ERT and within the required time frame. The applicability of the V-65 O2 RATA was not obvious to the regulatory specialist during the initial evaluation of 40 CFR 63.1575 (k)(2) applicability.

The Refinery is in the process of verifying all applicable performance evaluations subject to the electronic reporting under Refinery MACT II. Additionally, compliance tasks with routine reminders are being developed to ensure that the required performance evaluations are being submitted electronically and on-time.

Event Started: 3/5/2018
 Stopped: 3/6/2018 ☐ Ongoing Event
 Discovered On: 3/6/2018

Source Number: S6220
 Abatement Device : _____
 Emission Point: _____

May have resulted in a violation of :
 Permit: 10761
 AQMD: _____
 Other: _____

Event Description: It was discovered on March 6, 2018 that permitted portable storage tank, S-6220, missed its initial carbon inspection as required per Title V Permit Condition 10761. The carbon inspection was due on March 5, 2018, and upon discovery the following day, on March 6, the inspection was completed.

Probable Cause: Internal investigation identified that the Hazardous Waste personnel responsible, was handling several field activities and inadvertently overlooked the need to request an inspection from the Refinery's air compliance inspection group. Additionally, a specific step to request the initial carbon inspection was not included in the associated procedure.

The carbon inspection, which resulted in non-detect, was completed immediately upon discovery. Additionally, associated procedures are being updated to include steps for initiating the required inspections under permit condition # 10761.

Event Started: 12/28/2016
Stopped: 3/22/2018 ☐ Ongoing Event
Discovered On: 3/14/2018

Source Number: _____
Abatement Device : _____
Emission Point: _____

May have resulted in a violation of :
Permit: _____
AQMD: 8-5-404
Other: _____

Event Description: It was discovered on March 14, 2018 that pressure relief device inspection reports were not submitted as required per 8-5-404 from the fourth quarter of 2016 through the fourth quarter of 2017. All the inspections during this time were conducted as required per 8-5-403.

Probable Cause: The internal investigation identified that the current air specialist was new to the position and inadvertently overlooked the requirement to submit the inspection reports. The work task to submit the routine reports was included in the turnover document however with the amount of content in the document it went unnoticed.
Corrective actions or preventative steps taken:

All inspection reports have been submitted to the BAAQMD. The turnover document has been improved to make this work task more visible. Additionally, compliance tasks with routine reminders are being developed for the responsible Air Specialist to ensure that the inspection reports are submitted and on-time.

Event Started: 3/27/2018
Stopped: 3/28/2018 ☐ Ongoing Event
Discovered On: 3/27/2018

Source Number: S3186
Abatement Device : _____
Emission Point: _____

May have resulted in a violation of :
Permit: _____
AQMD: Regulation 2 Rule 1 Section 12
Other: _____

Event Description: It was discovered on March 27, 2018, that Tank-3186 was heated to 138 degrees Fahrenheit while the stock flash point result taken on February 27, 2018 indicated 173 degrees Fahrenheit. Consequently, there is the potential that the tank may have not complied with the exemption in BAAQMD Regulation 2-1-123.3 due to the tank temperature not remaining at least 36 degrees Fahrenheit below the stock flash point. An additional sample of T-3186 was taken on March 28, 2018 with a result of 179 degrees Fahrenheit.

Probable Cause: The Refinery has procedures and work practices in place to ensure compliance with tank requirements. In this instance, operators were monitoring the tank temperature but inadvertently left the tank heater on. Once the tank began to draw down the temperature elevated 1F degree. When the elevated temperature was discovered on the next shift, the tank heater was immediately shut off.
Corrective actions or preventative steps taken:

Following the temperature excursion, sampling was performed on the following day to verify tank exempt limits. This sample indicated a flash of 179°F which met the requirements of 2-1-123. Chevron conservatively submitted this deviation based on a prior sample taken on February 27, 2018 which indicated a flash slightly lower at 173°F, a differential of 35°F. Chevron has reviewed the analysis of both samples and believes the most recent sample is indicative of the tank contents on March 27, 2018.
Moreover, the 1°F degree discrepancy falls within the allowable tolerance of both the repeatability of the sample flash method and the accuracy of the temperature thermal couple set by the manufacture specifications. The Pensky-Martens Flash Point (PMCP) repeatability is 2.2C (~3.6F), referencing the sample taken on February 27, 2018, it's reasonable to conclude the error in the flash method provides a tolerance outside of 1F degree, and therefore within tolerable parameters. In addition, thermal couple used on TK-3186 has an accuracy of +/-5 percent.
In all circumstances, this evidence further concludes that the tank was in compliance on March 27, 2018 during the time the indicated temperature was 138°F. Chevron anticipates that the Air District take these findings into account when determining if a violation occurred.

The Richmond Refinery recognizes the importance of complying with BAAQMD requirements, and upon discovery, operational moves were made to decrease tank temperature. Accordingly, a sample was performed the following day which indicated the tank was within permit exempt limits. This incident has been communicated Refinery-Wide to increase incident awareness.

Event Started: 4/9/2018
Stopped: 4/11/2018 ☐ Ongoing Event
Discovered On: 4/11/2018

Source Number: S4155
Abatement Device :
Emission Point:

May have resulted in a violation of :
Permit:
AQMD: BAAQMD 1-522.4
Other:

Event Description: The Refinery submitted a late inoperative monitor notification (RCA 07G69) on April 11, 2018 per BAAQMD Rule 1-522.4. It was discovered that daily calibration did not occur on the F-135 furnace (S-4155) NOx and O2 CEMS were successfully calibrated on 4/11/2018 upon discovery.

Probable Cause: An audit of daily monitor review results discovered that daily calibration had not occurred on the F-135 furnace (S-4155) NOx and O2 CEMS on Friday April 6th, 2018 through Tuesday April 10th, 2018. Routine maintenance was performed on the analyzer and due to an oversight the calibration was not reset back to auto. This not only stops auto calibrations but also shuts off the trouble alarm indication for the analyzer crew. The inoperative monitor wasn't recognized during the following routine daily monitor reviews. This inadvertent oversight resulted in a late submittal of the inoperative monitor notification.

Discussions were held with the compliance group regarding task prioritization and focusing on the task at hand. The discussion re-iterated to always follow procedures and to utilize the daily compliance monitoring checklist when completing the daily monitoring compliance review to prevent future occurrences.

Event Started: 4/11/2018 2:10 PM
Stopped: 4/12/2018 3:40 AM ☐ Ongoing Event
Discovered On: 4/11/2018

Source Number: S4285
Abatement Device : A0014
Emission Point:

May have resulted in a violation of :
Permit: 11066 7(a5)
AQMD:
Other:

Event Description: Following an unplanned shutdown of the Refinery's Fluid Catalytic Cracking unit the TR sets were shutdown on April 11, 2018 at 1410 hours. The TR sets were re-energized on April 12, 2018 at 0340 hours. As a result, the ESP was operating with greater than two TR sets below 200ma with the remaining TR sets less then 296ma averaged over a 3-hour period. The immediate shutdown of the TR sets is a Chevron process safety best practice to prevent any source of ignition in the ESP.

Probable Cause: On April 11, 2018 at approximately 1403 hours the FCC tripped off line due to low flow indication at the FCC's Regenerator, resulting in feed being pulled from the unit. The initial investigation identified that the Main Air Blower's (MAB), blow off valve, 50UV051, had opened, causing loss of air to the FCC's Regenerator. During normal operation, the anti-surge controller, 50UJC051 continuously monitors the distance between the MAB's operating point and surge control line. If the operating point moves within an unacceptable distance of the MAB's surge limit the blow off valve, 50UV051, opens, to maintain the required flow to prevent surging. On April 11, 2018 the blow off valve opened resulting in low air flow indication at the regenerator, which caused the FCC's Triconex Safety System to pull feed from the unit and subsequent shutdown of the TR sets. An immediate shutdown of the TR sets is a Chevron process safety best practice to prevent any source of ignition in the ESP. The cause of the blow-off valve to open has not yet been identified as the investigation is ongoing. Preliminary findings indicate that it may have been due to a loss of control power or wet instrument air.

Feed was re-introduced into the plant on April 11, 2018 at approximately 2200 hours and the TR sets were placed back in service on April 12, 2018 at 0340 hours.

The TR sets were re-energized on April 12, 2018 at 0340 hours. Upon completion of the internal investigation corrective actions will be identified and put in place.

Event Started: 4/14/2018 12:49 PM
Stopped: 4/14/2018 ☐ Ongoing Event
Discovered On: 4/14/2018

Source Number: S6016
Abatement Device :
Emission Point:

May have resulted in a violation of :
Permit:
AQMD:
Other:

Event Description: On April 14th, 2018 flaring occurred at the FCC Flare (S-6016 when relief system flows exceeded the capacity of flare gas recovery resulting in visible flaring. The flaring deviated from 40 CFR 60 Subpart J (60.104(a)(1)) because it was not due to a startup, shutdown, or malfunction, and the vent gas did not have a hydrogen sulfide concentration below 230 mg/dscm (0.10gr/dscf).

Probable Cause: On April 14th, 2018 following a shutdown for maintenance at the Pressure Swing Adsorption unit (PSA) in South Isomax. Operations was in the process of returning the unit back to service. Operations followed the appropriate procedure (PSA Start-up), however during the startup process the console Operator lost his place in the procedure when he was distracted with another task. When he returned to the PSA startup activities he resumed at the incorrect step, which led to over pressuring the tail gas system and lifting a PRD to relief. The relief flow overwhelmed FGR and led to flaring at the FCC flare.

The error was immediately recognized by operation personnel and corrective steps were made to stabilize the plant and flow to relief. The error of the missed step in the procedure was identified, addressed and discussed with operations. The individual involved was provided coaching on the importance of focusing on the task at hand and the criticality of following and signing off procedures step by step.

Event Started: 4/14/2018 11:14 PM
Stopped: 4/17/2018 4:08 PM ☐ Ongoing Event
Discovered On: 4/14/2018

Source Number: S4285
Abatement Device :
Emission Point:

May have resulted in a violation of :
Permit: 11066 Part 7 (a5)
AQMD:
Other:

Event Description:

On April 14, 2018 at 2313 hours the FCC had an unplanned shutdown due to loss of 850# steam subsequent to a mechanical breakdown at the Refinery's Power Plant. The TR sets were shutdown from April 14, 2018 at 2314 hours to April 17, 2018 at 1608 hours. As a result, the ESP was operating with greater than two TR sets below 200mA with the remaining TR sets less than 296mA averaged over a 3-hour period. The immediate shutdown of the TR sets is a Chevron process safety best practice to prevent any source of ignition in the ESP. Feed was re-introduced into the plant on April 17, 2018 at approximately 1048 hours.

Probable Cause:

Corrective actions or
preventative steps taken:

The #1 Power Plant experienced a failure of the #5 Boiler Feedwater (BFW) pump (TP-5), which is a steam-driven turbine pump that supplies a continuous boiler feedwater to the power plant boilers for steam generation. The loss of adequate feedwater pressure caused the running boilers to trip on low steam drum level, resulting in a Refinery-Wide steam load shed.

The FCCs wet gas compressor (WGC) is a steam turbine-driven compressor that runs off the Refinery's 850# steam supply. When all 4 boilers that were in operation tripped off line, the 850# steam supply to the turbine lost pressure and dropped below 400psig, causing the WGC speed to slow down. At the lower operating speed, the WGC was unable to compress the overhead of the FCC's Main Fractionator, resulting in a shutdown of the FCC plant, which included a shutdown of the TR sets. The immediate shutdown of the TR sets is a Chevron process safety best practice to prevent any source of ignition in the ESP. Feed was re-introduced into the plant on April 17, 2018 at approximately 1048 hours and the TR sets were placed back in service on April 17, 2018 at 1608 hours.

TP-5 turbine and respective key components were pulled for servicing in 2017 to address a loss of efficiency and were reinstalled in early 2018. TP-5 was placed in-service in March and at that time, the turbine was speed controlled using the inlet block valve, with the admission valve being fully open and therefore, not operated by the governor.

Prior to the failure of TP-5, at approximately 9:45PM, Operations attempted to switch the turbine to governor control as opposed to control by the inlet block valve. To transition to governor control, the inlet block valve must be in full open position. As the inlet block valve was opened, during the last 10-15%, the governor started moving erratically up and down, thereby opening and closing the admission valve. The Operator partially closed the inlet block valve, attempting to bring the pump back to steady operation but the surging continued. The surging resulted in a loss of discharge pressure causing MP-1 to come online on Automatic Pump Start (APS). Within seconds, TP-5 stabilized and Operations shut down P-1 to continue placing P-5 on governor control. This cycle repeated itself during efforts to troubleshoot the governor and bring the system onto governor control. At 10:24 PM, TP-5 started surging uncontrollably and activated the overspeed trip mechanism as designed, resulting in the shutdown of P-5 and a trip of all on-line boilers.

Following the incident, an internal investigation was initiated. The governor and the steam admission valve, which controls the steam to the turbine driver, were removed and sent out for inspection. The inspection identified that the steam admission valve stem was 'bent' and the valve stem was not squared to the plug. As per OEM specifications, the mating surfaces must be at 90 degrees from the stem. Additionally, the inspection identified two other potential contributing factors. The L-gland carbon was worn due to the misalignment in the valve stem and associated linkage, and the control arm which attaches to the governor rod was found to be 0.125" too short.

The investigation concluded that the bent admission valve stem and contributing factors from the other valve components prevented the governor from providing stable control of the admission valve, causing the surging and subsequent shut down of TP-5.

In response to this incident, the Refinery is implementing a process to review the Quality Assurance Program for suppliers, specifically the Quality Control of work sent to third party suppliers. This will also include a requirement for outside shops to provide relevant paper to the third-party suppliers. Additionally, the Minimum Recommended General-Purpose Turbine Inspection Hold Points document will be reviewed and updated; it will include checks for specialty valves attached to the machine (i.e. function tests).

Event Started: 4/14/2018 11:33 PM
Stopped: 4/17/2018 4:32 AM ☐ Ongoing Event
Discovered On: 4/14/2018

Source Number: S4285
Abatement Device: _____
Emission Point: _____

May have resulted in a violation of:
Permit: 11066 Part 7(a4)
AQMD: _____
Other: _____

Event Description: On April 14, 2018 at 2313 hours the FCC had an unplanned shutdown due to loss of 850# steam subsequent to a mechanical breakdown at the Refinery's Power Plant. As a result, the ESP temperature operated below 550 F on a 1-hr average from April 14, 2018 at 2333 hours to April 17, 2018 at 0432 hours. Feed was re-introduced into the plant on April 17, 2018 at approximately 1048 hours.

Probable Cause: The #1 Power Plant experienced a failure of the #5 Boiler Feedwater (BFW) pump (TP-5), which is a steam-driven turbine pump, that supplies a continuous boiler feedwater to the power plant boilers for steam generation. The loss of adequate feedwater pressure caused the running boilers to trip on low steam drum level, resulting in a Refinery-Wide steam load shed.

Corrective actions or preventative steps taken:

The FCCs wet gas compressor (WGC) is a steam turbine-driven compressor that runs off the Refinery's 850# steam supply. When all 4 boilers that were in operation tripped off line, the 850# steam supply to the turbine lost pressure and dropped below 400psig, causing the WGC speed to slow down. At the lower operating speed, the WGC was unable to compress the overhead of the FCC's Main Fractionator. This resulted in a shutdown of the FCC plant, including the shutdown of the ESP. As a result, the ESP temperature operated below 550 F on a 1-hr average from April 14, 2018 at 2333 hours to April 17, 2018 at 0432 hours. Feed was re-introduced into the plant on April 17, 2018 at approximately 1048 hours.

TP-5 turbine and respective key components were pulled for servicing in 2017 to address a loss of efficiency and were reinstalled in early 2018. TP-5 was placed in-service in March and at that time, the turbine was speed controlled using the inlet block valve, with the admission valve being fully open and therefore, not operated by the governor.

Prior to the failure of TP-5, at approximately 9:45PM, Operations attempted to switch the turbine to governor control as opposed to control by the inlet block valve. To transition to governor control, the inlet block valve must be in full open position. As the inlet block valve was opened, during the last 10-15%, the governor started moving erratically up and down, thereby opening and closing the admission valve. The Operator partially closed the inlet block valve, attempting to bring the pump back to steady operation but the surging continued. The surging resulted in a loss of discharge pressure causing MP-1 to come online on Automatic Pump Start (APS). Within seconds, TP-5 stabilized and Operations shut down P-1 to continue placing P-5 on governor control. This cycle repeated itself during efforts to troubleshoot the governor and bring the system onto governor control. At 10:24 PM, TP-5 started surging uncontrollably and activated the overspeed trip mechanism as designed, resulting in the shutdown of P-5 and a trip of all on-line boilers.

Following the incident, an internal investigation was initiated. The governor and the steam admission valve, which controls the steam to the turbine driver, were removed and sent out for inspection. The inspection identified that the steam admission valve stem was 'bent', and the valve stem was not squared to the plug. As per OEM specifications, the mating surfaces must be at 90 degrees from the stem. Additionally, the inspection identified two other potential contributing factors. The L-gland carbon was worn, due to the misalignment in the valve stem and associated linkage, and the control arm which attaches to the governor rod was found to be 0.125" too short.

The investigation concluded that the bent admission valve stem and contributing factors from the other valve components prevented the governor from providing stable control of the admission valve, causing the surging and subsequent shut down of TP-5.

In response to this incident, the Refinery is implementing a process to review the Quality Assurance Program for suppliers, specifically the Quality Control of work sent to third party suppliers. This will also include a requirement for outside shops to provide relevant paper to the third-party suppliers. Additionally, the Minimum Recommended General Purpose Turbine Inspection Hold Points document will be reviewed and updated; it will include checks for specialty valves attached to the machine (i.e. function tests).

Event Started: 4/14/2018 10:39 PM
Stopped: 4/15/2018 12:18 AM ☐ Ongoing Event
Discovered On: 4/14/2018

Source Number: S6016
Abatement Device: _____
Emission Point: _____

May have resulted in a violation of:
Permit: _____
AQMD: _____
Other: 40 CFR 60 Subpart J (60.104(a))

Event Description: This deviation is being filed out of an abundance of caution due to the ongoing investigation. On April 14th, 2018 flaring occurred at the FCC Flare (S-6016) due to the loss of steam at the wet gas compressor. The flaring deviated from 40 CFR 60 Subpart J (60.104(a)(1)) because it was not due to a startup, shutdown, or malfunction, and the vent gas did not have a hydrogen sulfide concentration below 230 mg/dscm (0.10gr/dscf).

Probable Cause: The #1 Power Plant experienced a failure of the #5 Boiler Feedwater (BFW) pump (TP-5), which is a steam-driven turbine pump that supplies a continuous boiler feedwater to the power plant boilers for steam generation. The loss of adequate feedwater pressure caused the running boilers to trip on low steam drum level, resulting in a Refinery-Wide steam load shed. The sag in refinery steam caused the FCC Wet Gas Compressor (WGC) speed to slow down, over pressuring C-90 and actuating the pressure controller to the flare relief system and subsequent shutdown of the FCC Unit.

TP-5 turbine and respective key components were pulled for servicing in 2017 to address a loss of efficiency and were reinstalled in early 2018. TP-5 was placed in-service in March and at that time, the turbine was speed controlled using the inlet block valve, with the admission valve being fully open and therefore, not operated by the governor.

Prior to the failure of TP-5, at approximately 9:45PM, Operations attempted to switch the turbine to governor control as opposed to control by the inlet block valve. To transition to governor control, the inlet block valve must be in full open position. As the inlet block valve was opened, during the last 10-15%, the governor started moving erratically up and down, thereby opening and closing the admission valve. The Operator partially closed the inlet block valve, attempting to bring the pump back to steady operation but the surging continued. The surging resulted in a loss of discharge pressure causing MP-1 to come online on Automatic Pump Start (APS). Within seconds, TP-5 stabilized and Operations shut down P-1 to continue placing P-5 on governor control. This cycle repeated itself during efforts to troubleshoot the governor and bring the system onto governor control. At 10:24 PM, TP-5 started surging uncontrollably and activated the overspeed trip mechanism as designed, resulting in the shutdown of P-5 and a trip of all on-line boilers.

Following the incident, an internal investigation was initiated. The governor and the steam admission valve, which controls the steam to the turbine driver, were removed and sent out for inspection. The inspection identified that the steam admission valve stem was bent and the valve stem was not squared to the plug. As per OEM specifications, the mating surfaces must be at 90 degrees from the stem. Additionally, the inspection identified two other potential contributing factors. The L-gland carbon was worn due to the misalignment in the valve stem and associated linkage, and the control arm which attaches to the governor rod was found to be 0.125" too short.

The investigation concluded that the bent admission valve stem and contributing factors from the other valve components prevented the governor from providing stable control of the admission valve, causing the surging and subsequent shut down of TP-5.

In response to this incident, the Refinery is implementing a process to review the Quality Assurance Program for suppliers, specifically the Quality Control of work sent to third party suppliers. This will also include a requirement for outside shops to provide relevant paper to the third-party suppliers. Additionally, the Minimum Recommended General-Purpose Turbine Inspection Hold Points document will be reviewed and updated; it will include checks for specialty valves attached to the machine (i.e. function tests).

Event Started: 4/15/2018 12:00 AM
Stopped: 4/15/2018 2:00 PM ☐ Ongoing Event
Discovered On: 4/15/2018

Source Number: S4285
Abatement Device: _____
Emission Point: _____

May have resulted in a violation of :
Permit: _____
AQMD: _____
Other: 40 CFR 63.1564 (a5).ii _____

Event Description: On April 14, 2018 at 2313 hours the FCC had an unplanned shutdown due to loss of 850 # steam subsequent to a mechanical breakdown at the Refinery's Power Plant. The FCC did not meet the alternative standard per 40 CFR 63.1564 (a)(5).ii from April 15, 2018 0000 to 0600 hours and from 0900 to 1400 hours. Feed was re-introduced into the plant on April 17, 2018 at approximately 1048 hours.

UPDATE:

Upon further review of the operational data and the regulatory language, it is Chevron's position that the FCC met the alternative standard, per 40 CFR 63.1564(a)(5).ii during the shutdown period. During periods of FCC shutdown, MACT UUJ requires the FCC to either maintain opacity of less than 20% on a 3-hour average or maintain the inlet velocity to the primary internal cyclone above 20 ft/s on a 1-hour average. Upon further review, the FCC maintained a cyclone velocity above 20 ft/s until the main air blower was shut down after which the unit has ceased operation and this requirement no longer applies. This would be consistent with the District's definition for an FCC shutdown as defined in section 205 of Rule 6-5.

Probable Cause:
Corrective actions or
preventative steps taken:

The #1 Power Plant experienced a failure of the #5 Boiler Feedwater (BFW) pump (TP-5). The TP-5 is a steam-driven turbine pump that supplies a continuous boiler feedwater at the proper pressure and quantities to the power plant boilers for steam generation. The loss of adequate feedwater pressure caused the running boilers to trip on low steam drum level, resulting in a Refinery-Wide steam load shed.

The FCCs wet gas compressor (WGC) is a steam turbine-driven compressor that runs off the Refinery's 850 # steam supply. When all 4 boilers that were in operation tripped off line, the 850 # steam supply to the turbine lost pressure and dropped below 400psia, causing the WGC speed to slow down. At the lower operating speed, the WGC was unable to compress the overhead of the FCC's Main Fractionator resulting in a shutdown of the TR sets and feed to be removed from the unit. A 96-hr notification (RCA # 07G78) and breakdown request (RCA #07G72) were submitted for a potential opacity excess occurring during the FCC shutdown.

TP-5 turbine and respective key components were pulled for servicing in 2017 to address a loss of efficiency and were reinstalled in early 2018. TP-5 was placed in-service in March and at that time, the turbine was speed controlled using the inlet block valve, with the admission valve being fully open and therefore, not operated by the governor.

Prior to the failure of TP-5, at approximately 9:45PM, Operations attempted to switch the turbine to governor control as opposed to control by the inlet block valve. To transition to governor control, the inlet block valve must be in full open position. As the inlet block valve was opened, during the last 10-15%, the governor started moving erratically up and down, thereby opening and closing the admission valve. The Operator partially closed the inlet block valve, attempting to bring the pump back to steady operation but the surging continued. The surging resulted in a loss of discharge pressure causing MP-1 to come online on Automatic Pump Start (APS). Within seconds, TP-5 stabilized and Operations shut down P-1 to continue placing P-5 on governor control. This cycle repeated itself during efforts to troubleshoot the governor and bring the system onto governor control. At 10:24 PM, TP-5 started surging uncontrollably and activated the overspeed trip mechanism as designed, resulting in the shutdown of P-5 and a trip of all on-line boilers.

Following the incident, an internal investigation was initiated. The governor and the steam admission valve, which controls the steam to the turbine driver, were removed and sent out for inspection. The inspection identified that the steam admission valve stem was "bent". The valve internals were disassembled and it was discovered that the valve stem was not squared to the plug. As per OEM specifications, the mating surfaces must be at 90 degrees from the stem. Additionally, the inspection identified two other potential contributing factors. It was discovered that the L-gland carbon was worn due to the misalignment in the valve stem and associated linkage, and that the control arm which attaches to the governor rod was found to be 0.125" too short.

The investigation concluded that the bent admission valve stem and contributing factors from the other valve components prevented the governor from providing stable control of the admission valve, causing the surging and subsequent shut down of TP-5.

A 10-day deviation report was submitted on April 23, 2018 for failure to meet the alternative standard per 40 CFR 63.1564 (a)(5).ii, during the FCC shutdown, from April 15, 2018 0000 to 0600 hours and from 0900 to 1400 hours. Consistent with the Air District's definition for a FCC shutdown, "FCCU shutdown is a

period which fresh feed flow to the FCCU reactor stops and ends when the main air blower for catalyst recirculation is shutdown", the shutting down period started at 2313 and ended at 2354 hours on April 15, 2018. Upon further review of the data, the FCC met the in primary internal cyclone above 20 ft/s as the primary internal cyclone velocity averaged 45 ft/s over the duration of the event. Data has been provided to the BAAQMD Inspector.

In response to this incident, the Refinery is implementing a process to review the Quality Assurance Program for suppliers, specifically the Quality Control of work sent to third party suppliers. This will also include a requirement for outside shops to provide relevant paper to the third-party suppliers. Additionally, the Minimum Recommended General-Purpose Turbine Inspection Hold Points document will be reviewed and updated; it will include checks for specialty valves attached to the machine (i.e. function tests).

Event Started: 4/17/2018 3:00 PM
Stopped: 4/17/2018 6:00 PM ☐ Ongoing Event
Discovered On: 4/17/2018

Source Number: V-475
Abatement Device: _____
Emission Point: _____

May have resulted in a violation of:
Permit: _____
AQMD: _____
Other: 40 CFR60.104(a)(1) _____

Event Description:

During start up activities at the Refinery's 3H2S Plant (S-4433), the V-475 fuel gas drum exceeded its 3-hr H2S limit from 1500 hours to 1800 hours and V-701 fuel gas drum exceeded its 3-hr H2S limit from 1400 hours to 1900 hours. The sources affected by the excess at V-475 include F-410 (S-4159), F-420 (S-4160), F-710 (S-4167), F-500 (S-4161), S-4162 & S-4163, F-600 (S-4164, S-4165 & S-4166), F-730 (S-4168), F-731 (S-4169), F-100 (S-4152), F-120 (S-4154), F-135 (S-4155), F-340 (S-4158), F-305 (S-4170), F-1251 (S-4333, S-4334 & S-4335), F-1361 (S-4330, S-4331 & S-4332), F-1551 (S-4336, S-4337, S-4338 & S-4339), F-1650 (S-4339), F-651 (S-4188) and F-661 (S-4189). The sources affected by the excess at V-701 include 1-Boiler (S-4129), 3-Boiler (S-4131), 4-Boiler (S-4132), 5-Boiler (S-4133) and 7-Boiler (S-4135) and Cogen 1000 Train HSRG (S-4351). Reference RCA# s 07G79 and 07G80.

Probable Cause:

Corrective actions or
preventative steps taken:

The 3H2S Plant (S-4433), in the Cracking Business Unit uses DEA in the absorber C-200, to remove H2S in hydrocarbon streams from the FCC's Gas Recovery Unit (S-4286) and Deisobutanizer Plant (S-4355). During start-up of the 3H2S plant the Cracking unit will route process gas from the 3H2S plant to the 5H2S plant (at the D&R business unit) until 3H2S product is on-test for H2S in the fuel gas system. On April 17, 2018 at approximately 1400 hours Operations was in the process of placing the FCC and the 3H2S plant in service when H2S began to increase in the fuel gas system. Troubleshooting efforts identified that the common line from 3H2S to the emergency scrubber, C-840 (at 5H2S), was blocked in.

The internal investigation identified that the valve routing process gas from 3H2S to C-840 that had been opened during the shutdown, was in the closed position. The process gas could not flow to 5H2S and saturated the DEA in the 3H2S system. This caused poor H2S removal at C-200 and H2S carryover into the fuel gas system. This resulted in the excess of the 3-hr H2S limits at V-475 and V-701.

Upon discovery Operations took immediate actions and requested D&R to open the line to C-840. Additionally, 3H2S was charged with fresh DEA to maximize H2S removal. Long term corrective actions are in place to update associated procedures with verification steps to ensure that process gas from 3 H2S is routed to the 5 H2S and to verify that the line to C-840 is open.

Event Started: 3/31/2017
Stopped: 10/3/2017 ☐ Ongoing Event
Discovered On: 4/17/2018

Source Number: S4285
Abatement Device :
Emission Point:

May have resulted in a violation of :
Permit:
AQMD:
Other: 40 CFR Part 60 Appendix F 5.1.

Event Description: It was discovered on April 17, 2018 that a Relative Accuracy Test Audit (RATA) was not performed on the V-65 O2 analyzer as required per 40 CFR Part 60 Appendix F 5.1.1. On January 14, 2016 a RATA was conducted on the V-65 O2 analyzer, and due to a scheduling error with the source testing contractor, a RATA was not conducted until October 3, 2017.

Probable Cause: Per the Alternative SOx Monitoring Plan dated April 16, 1996, the O2 analyzer (V-65 O2) located on the outlet of the regenerator at the FCCU (S-4285) will comply with same NSPS requirements as the O2 CEMs on the FCC stack. Per 40 CFR Part 60 Appendix F 5.1 each CEM must be audited at least once each calendar quarter. It has been Chevron's practice to schedule a RATA to be performed on the V-65 O2 analyzer during the 1st quarter of each calendar year and a Relative Accuracy Audit (RAA) to be performed during the remaining 2nd, 3rd and 4th quarters. On January 6, 2017 a RAA was conducted by the source testing contractor in place of the routinely scheduled 1st quarter V-65 RATA. The internal investigation identified that an administrative error occurred when the source testing contractor was transferring information from Chevron's proposed 2017 testing schedule to the final schedule. A RAA was scheduled for January 6, 2017 rather than a RATA, which Chevron had originally scheduled.

The Refinery will evaluate the current process for developing the yearly source testing schedule and work with the source testing contractor to ensure there are verification steps to ensure that all required testing has been properly scheduled. Also, associated procedures and checklists will be reviewed and updated to include verification steps to ensure required testing is being conducted on the day of the test and again verified during post testing report reviews.

Event Started: 4/23/2018 11:00 AM
Stopped: 4/23/2018 12:00 PM ☐ Ongoing Event
Discovered On: 4/23/2018

Source Number: S4194
Abatement Device :
Emission Point:

May have resulted in a violation of :
Permit:
AQMD: 9-1-307
Other:

Event Description: Due to plugging in the third sulfur condenser, E-2303, on April 23, 2018, the SRU 3 stack (S-4194) exceeded its 1-hr average SO2 limit of 250 ppm corrected to 9% O2 for the 1100 clock hour.

Probable Cause: On April 23, 2018 at approximately 1100 hours, Operations observed SO2 emissions increasing at SRU #3 (S-4229). Operations requested analyzer maintenance to verify that the SO2 CEMs was functioning properly however no issues were identified. Continued troubleshooting efforts by Operations, included the introduction of additional air to increase O2, the introduction of additional caustic to assist in absorption of SO2 and verifying if there was any H2S breakthrough at the quench column, C-2350, but none of these efforts improved and/or identified the source of increasing SO2. The outside operator then inspected the sultrap, which is where the liquid sulfur flows, from the units three sulfur condensers (E-2301/2302/2303). The operator discovered that there was plugging at the outlet of the sultrap and immediately, removed the obstruction. Within minutes, the level in the third sulfur condenser, E-2303 dropped and SO2 emissions dropped.

The final investigation determined that the plugging at the sultrap, caused sulfur levels to rise in E-2303 as it was restricted from draining to the sulfur pit. This led to sulfur carryover into the Thermal Oxidizer, resulting in an excess of the 250 ppm SO2 limit at the stack. There is a weekly routine task to clean the sultraps and this had been completed the day prior to the excess.

Operations immediately removed the obstruction at the sultrap outlet. Within minutes, the level in the third condenser dropped, E-2303 and SO2 emissions decreased. As a long-term solution the Refinery will be installing sight ports (at all three SRUs) on the sultrap outlet lines to verify sulfur flow out of the condensers to the sulfur pit. This work is already in scope for upcoming SRU Turnarounds. Upon installation of the sight port a routine task will be put in place to check for sulfur flow through.

Event Started: 5/17/2018
Stopped: 5/17/2018 ☐ Ongoing Event
Discovered On: 5/17/2018

Source Number: S4349
Abatement Device: _____
Emission Point: _____

May have resulted in a violation of :
Permit: Reg. 2-1-301
AQMD: _____
Other: _____

Event Description: Chevron submits this Title V deviation at the BAAQMD's request for Regulation 2 Rule 1 section 301. Chevron was issued NOV#58132 on May 17th, 2018 for not acquiring an Authority to Construct permit for installation of burner tips on F-1650 (S-4349). However, the installation of the burner tips were authorized by the Compliance and settlement agreements signed August 1, 2017 & January 18, 2018 and Compliance and Settlement agreement Action plan dated October 20th, 2017.

Probable Cause: The installation of the burner tips were authorized by the Compliance and settlement agreements signed August 1, 2017 & January 18, 2018 and Compliance and Settlement agreement Action plan dated October 20th, 2017.

Corrective actions or preventative steps taken:

The Refinery disclosed the issues with the furnace in March 2017 and proactively worked with the District as it developed a solution. The District and the Refinery entered into a Compliance and Settlement Agreement to address the alleged violation included in this NOV. Therefore, in our view, the NOV should not have been issued in the first instance and we understand that the District is merely seeking to ensure that its paperwork is complete rather than to allege a new claim that has already been settled.

Event Started: 5/24/2018 5:23 PM
Stopped: 5/24/2018 5:24 PM ☐ Ongoing Event
Discovered On: 5/24/2018

Source Number: S6010
Abatement Device: _____
Emission Point: _____

May have resulted in a violation of :
Permit: _____
AQMD: 40 CFR 60 Subpart J (60.104(a)
Other: _____

Event Description: On May 24th, 2018 flaring occurred at the LSFO Flare (S-6010) due to the loss of the H2 recycle compressor, K-1600 and subsequent Diesel Hydrotreater (DHT) shutdown. The flaring deviated from 40 CFR 60 Subpart J (60.104(a)(1)) because it was not due to a startup, shutdown, or malfunction, and the vent gas did not have a hydrogen sulfide concentration below 230 mg/dscm (0.10g/dscd).

Probable Cause: On May 24th, 2018 the DHT unit experienced a plant upset due to a failed electrical transformer at the Refinery's Utilities and Environmental division. Due to the power outage the plants recycle compressor, feed pump, furnaces tripped offline impacting the operation of the Diesel Hydrotreater (DHT) which ultimately led to a shutdown of the unit. Prior to shutting down the unit Operations worked to stabilize the plant. During this process to control the pressure in the H2S stripper column C-1650, operations had to single block the overhead pressure controller due to leak by. Downstream of the controller and isolation valve nitrogen was also hooked up to maintain the necessary pressure on C-1650. Shortly after shift change, the control board operator received a high-pressure alarm on C-1650, and the outside operator closed off the nitrogen. Since C-1650 pressure controller was single blocked, there was no outlet flow at this time. A pressure relief device lifted resulting in flaring. The C-1650 pressure controller was then unblocked to let down pressure to SH2S plant.

Operations immediately responded to stabilize the plant while electricians responded and identified the failed transformer. The electricians were able to restore power via single line feed so operations could re-start the unit safely. The transformer TX-266 that failed was sent to the shop for testing and repairs. At the shop it was confirmed that the transformer had an internal fault on the "C" phase of the secondary windings and a complete rewind will be conducted for repairs.

Event Started: 5/25/2018 8:00 PM
Stopped: 5/26/2018 12:00 AM ☐ Ongoing Event
Discovered On: 5/25/2018

Source Number: V-701
Abatement Device: _____
Emission Point: _____

May have resulted in a violation of:
Permit: _____
AQMD: _____
Other: 40 CFR60.104(a)(1) _____

Event Description: V-701 Fuel Gas Drum exceeded its 160 ppm 3-hr average H2S limit from May 25, 2018 at 20:00 hours to May 26, 2018 at 00:00 hours. The sources affected by the excess at V-701 include 1-Boiler (S-4129), 3-Boiler (S-4131), 4-Boiler (S-4132), Cogen 1000 Train HSRG (S-4351) and Cogen 2000 Train HSRG (S-4353).
Reference RCA# 07H17.

Probable Cause: On May 25th, 2018 the V-701 Fuel Gas Drum exceeded its 160 ppm 3-hour average as a result of elevated sulfur in the FCC Unit feed that overwhelmed the FCC 3 H2S plant and subsequently resulted in the exceedance in the Refinery fuel gas system. The Refinery was starting up an out of service reactor module that was down due to a scheduled catalyst change. The elevated sulfur feed at the FCC was caused by a loss of reaction at both TKC reactor modules. The in-service reactor module experienced a loss of reaction after a sudden drop in fuel gas pressure which impacted the online furnace. This occurred while the unit was in the process of starting up the out of service reactor module. Under normal operating conditions the in-service reactor module would be able to help control and maintain the sulfur content in the feed, but with both Modules in an abnormal condition the unit was unable to remain below the limit.

The Refinery is reviewing all applicable procedures to add steps to confirm sulfur content and catalyst activity on the running module is on test. This verification will help ensure no matter what posture the combined feed systems are in the feed will be monitored to help prevent future exceedances.

Event Started: 7/1/2016
Stopped: 6/21/2018 ☐ Ongoing Event
Discovered On: 6/13/2018

Source Number: S6051
Abatement Device: _____
Emission Point: _____

May have resulted in a violation of:
Permit: _____
AQMD: 11-10-304
Other: _____

Event Description: It was discovered on June 13, 2018 that one of the two return lines to the Alky CWT (S-6051) has not been monitored as required per BAAQMD 11-10-304. During this time, the return line was being monitored by an on-line continuous hydrocarbon analyzer. The hydrocarbon analyzer is a parametric monitoring device that was approved by the District to measure total hydrocarbon concentration to detect leaks in a heat exchanger system pursuant to Permit Condition #14596.

Probable Cause:
Corrective actions or
preventative steps taken:

The Alky Cooling Water Tower (CWT) serves two cooling systems, with one providing water (supply water) to the Alkylation Plant and the other supplying water to the Butamer and Yard Deisobutanizer (YDIB) plants. The water from both cooling systems is mixed together in the tower basin before being routed back to the process plants. The supply water is then circulated through the process plants and returned on either one of the two return lines to the Alky CWT for cooling. It was discovered on June 13, 2018 that one of the two return lines to the Alky CWT (the Alky Plant return line) had not been monitored as required per BAAQMD 11-10-304.

Internal investigation identified that at the time the BAAQMD 11-10-304 sampling plan was implemented, the implementation team did not have an accurate understanding of the Alky CWT return lines' routing. It appears that the understanding was that the sample piping for the two CWT return lines were combined upstream of the sampling point. Although the manifold piping does exist to combine the two streams, it was not aligned in this manner nor would the difference in line pressures allow for proper mixing.

Immediately, upon discovery field walks were conducted with multiple disciplines (Operations, Process Engineering, Analyzer Mechanics, HES) to verify the Alky CWT return line configurations, and subsequently a sample point on the YDIB return line was included into the 11-10-304 sampling plan. A sample was taken on June 21, 2018, with a result of non-detect. Additionally, the current CWT Environmental Specialist is reviewing the return line configurations on all applicable CWTs to verify compliance with BAAQMD 11-10 sampling requirements.

Event Started: 7/28/2017	<input type="checkbox"/> Ongoing Event
Stopped: 11/2/2017	
Discovered On: 6/19/2018	

Source Number: S6051
Abatement Device: _____
Emission Point: _____

May have resulted in a violation of:
Permit: 14596
AQMD: BAAQMD 1-523.1 and 523.2
Other: _____

Event Description: It was discovered on June 19, 2018, during a records review that the hydrocarbon analyzer, 12A11401, monitoring one of the two Alky Cooling Water Tower (CWT) return lines was not reported as required per BAAQMD Regulation 1-523.1. Additionally, the hydrocarbon analyzer was inoperative for greater than 15 consecutive days.

Probable Cause: The environmental persons responsible for reviewing the analyzer data and preparing and submitting inoperative monitor notifications did not have an accurate understanding of the Alky CWT return lines routings. The analyzers were understood to be redundant analyzers on a common return stream instead of the actual application where each analyzer samples a discrete CWT return line. As a result, when one analyzer was inoperative it was not recognized as requiring an inoperative monitor notification.

Field walks were conducted with multiple disciplines (Operations, Process Engineering, Analyzer Mechanics, HES) to verify the Alky CWT return line configurations. The correct return line routings and reporting requirements have been communicated to the appropriate persons.

Event Started: 6/20/2018	<input type="checkbox"/> Ongoing Event
Stopped: 6/20/2018	
Discovered On: 6/20/2018	

Source Number: S6013
Abatement Device: _____
Emission Point: _____

May have resulted in a violation of:
Permit: _____
AQMD: _____
Other: 40 CFR 60 Subpart J (60.104(a)

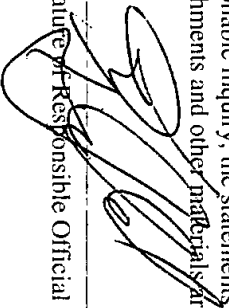
Event Description: The following deviation is being submitted in an abundance of caution to meet reporting requirements as the investigation is ongoing. On June 20th, 2018 flaring occurred at the NISO (S-6013), SISO (S-6012) and FCC (S-6016) flares. The flaring may have potentially deviated from 40CFR 60 Subpart J (60.104(a) (1)) because it may not have been due to startup, shutdown, or malfunction, and the vent gases did not have a hydrogen sulfide concentration below 230mg/dscm (0.10g/dscm).

Probable Cause: On June 20th, 2018 the Steam Turbine Driver (TK-600) for the ISO-6 Hydrogen Recycle Compressor K-600 tripped offline due to high vibration. The initial investigation indicates the cause of the compressor to shutdown was due to entrained liquid (i.e. wet steam), that passed through the steam turbine, which resulted in a shift in rotor axial position (bearings). This consequently triggered a shutdown of the compressor by design. The TK-600 steam turbine knockout pot (V-696) reached its high-level alarm in approximately thirty seconds. With the compressor offline, operations followed procedures, pulled feed from the unit, and began depressuring the reactors to safely shutdown the plant. During this process of shutting down, flaring occurred, which is a result of the unit requiring depressurization before a complete shutdown.

The investigation for this incident is ongoing. Corrective actions and or preventative measures have not been determined at this time.

Certification Statement

I certify under penalty of law that based on the information and belief formed after reasonable inquiry, the statements and information in this document and in all attachments and other materials are true, accurate, and complete.

x

Signature of Responsible Official

Kory Judd
Print Name

General Manager Richmond Refinery
Title

30 July 2018
Date

**BAAQMD Title V Permit
6 Month Monitoring Report**

From 1/1/2018 to 6/30/2018

A0010 Chevron Richmond Refinery

Facility Address: 841 Chevron Way City: Richmond State: CA Zip Code: 94801-	Mailing Address: PO Box 1272 City: Richmond State: CA Zip Code: 94802-0272
Contact: Katie Gong	Title: Compliance Technician Phone: (510) 242-1930

Inoperable monitors as defined by BAAQMD Regulations 1-522 and 1-523 for the reporting period are summarized below:

Started	Stopped	Source (S#)	Abatement Device (A#)	Emission Point (P#)	Fuel	CEM	GLM	Gas	Parametric	NOx	SO2	CO	H2S	TRS	NH3	O2	CO2	H2O	LTA	Opacity/	Lead	Steam Flow	Wind Dir.	Wind Speed	pH	Temp.	VOC	Gauge Press.
1/8/2018 9:37 AM	1/16/2018 10:15 AM	S6016																										
Discovered On: 1/9/2018																												
Event Description: The FCC Flare sample station became inoperative on January 8, 2018 at 0937 hours and is currently ongoing. The flare sample station is part of the Flare Monitoring System. Resumption of monitoring to follow when repairs are complete. The sample station returned to service on January 16, 2018 at 1015 hours.																												
1/13/2018 5:07 AM	1/14/2018 7:32 AM	S4171																										
Discovered On: 1/15/2018																												
Event Description: F355 361 W Nox monitor became inoperative on January 13, 2018 at 0507 hours. The monitor was repaired and back in service on January 14, 2018 at 0732 hours.																												
1/23/2018 5:42 AM	1/25/2018 7:05 PM	S6010																										
Discovered On: 1/24/2018																												
Event Description: UPDATE: Resumption of Monitoring: The LSFO Flare water seal level indicator was repaired and placed back into service on 1/25/2018 at 1905 hours.																												
LSFO Flare (S-6010) water seal level indicator went inoperative on 1/23/2018 at 0542 hours. Maintenance is currently ongoing. A resumption of monitoring will be filed once maintenance is complete.																												
1/27/2018 9:24 AM	1/29/2018 9:51 AM	S4171																										
Discovered On: 1/28/2018																												
Event Description: F-355 360 East NOx, O2, and CO analyzers became inoperative on 1/27/2018 at 0924 hours. Analyzers repaired and put back in service: successful calibration on 1/29/2018 at 0951 hours.																												
2/12/2018 4:43 AM	2/13/2018 7:30 AM	S4171																										
Discovered On: 2/13/2018																												
Event Description: F355 361 W NOx monitor became inoperative on February 12, 2018 at 0443 hours. The monitor was repaired and back in service on February 13, 2018 at 0730 hours.																												
2/13/2018 9:32 AM	2/14/2018 2:00 PM	V-870																										
Discovered On: 2/14/2018																												
Event Description: Thier V870 BTU analyzer became inoperative on February 13, 2018 at 0932 hours. The analyzer came back online on February 14th, 2018 at 1400 hours.																												

Started	Stopped	Source (S#)	Abatement Device (A#)	Emission Point (P#)	CEM	GLM	Fuel	Gas	Parameter	NOx	SO2	CO	H2S	TRS	NH3	O2	CO2	H2O	LTA	Dractive/Lead	Steam Flow	Wind Dir.	Wind Speed	pH	Temp.	VOC	Gauge Press.
2/16/2018 5:00 AM	2/20/2018 9:55 AM	S435			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Discovered On: 2/19/2018 Event Description: UPDATE TO RCA# 07G30 It was discovered that plugging of the sample line caused the FCC NOx CEMS to have intermittent downtime from 2/16/2018 5:00 AM to 2/20/2018 9:55 AM. This notification is being made in an abundance of caution as repairs are ongoing. The FCC NOx analyzer failed auto calibration on 2/16, 2/17, 2/18, and 2/19. Each time the analyzer was repaired and passed manual calibration, however continues to not pass the daily autocalibration.																											
2/19/2018 4:00 PM	2/21/2018 10:08 AM	V-870			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Discovered On: 2/20/2018 Event Description: UPDATE: Repairs were completed and the V-870 BTU analyzer returned to service on February 21, 2018 at 1008 hours. The V870 BTU analyzer became inoperative on February 19, 2018 at 1600 hours and is currently ongoing. Resumption of monitoring to follow when repairs are complete.																											
3/31/2018 5:48 AM	4/1/2018 8:55 AM	S409			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Discovered On: 4/1/2018 Event Description: F 247 Nox analyzer became inoperative on March 31, 2018 at 0548 hours. The Nox analyzer was repaired and back online at 0855 hours on April 1, 2018.																											
4/6/2018 6:00 AM	4/11/2018 9:46 AM	S4155			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Discovered On: 4/11/2018 Event Description: Daily calibrations did not occur on the F-135 NOx and O2 CEMS from Friday, 4/6/2018 through Tuesday, 4/10/2018. The NOx and O2 CEMS were successfully calibrated on 4/11/2018 upon discovery.																											
4/17/2018 5:05 AM	4/20/2018 3:44 PM	A-262			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Discovered On: 4/19/2018 Event Description: UPDATE: Resumption of monitoring. The H2B Train Mechanical Scrubber De-Aerator (A-262) was repaired and placed back into service on 4/20/18 at 1544 hours. The H2B Train Mechanical Scrubber (A-262) De-Aerator vent flow meter became inoperative on 4/17/2018 at 0505 hours. Repairs in progress.																											
4/15/2018 10:43 AM		S6016			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Discovered On: 4/20/2018 Event Description: UPDATE: Upon further evaluation by the Refinery's internal instrument mechanics and GE Parametrics technicians, it was determined that the inoperative monitor notification (RCA# 07G84) was submitted in error.																											
4/18/2018 7:50 PM	4/20/2018 10:01 AM	V-701			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Discovered On: 4/20/2018 Event Description: The V-701 H2S analyzer became inoperative on 4/18/2018 at 1950 hours. Analyzer repaired and put back into service on 4/20/2018 at 1001 hours.																											
4/28/2018 3:58 PM	4/30/2018 1:24 PM	S435			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Discovered On: 4/30/2018 Event Description: The FCC NOx, O2, CO and SO2 CEMS were intermittently inoperative from April 28, 2018 at 1558 hours to April 30, 2018 at 1324 hours.																											
5/1/2018 2:23 PM	5/2/2018 4:25 PM	S6015			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Discovered On: 5/1/2018 Event Description: On May 1st, 2018 at 1423 hours the D&R flue sample station became inoperative. On May 2nd, 2018 at 1625 hours the sample station returned to service.																											

Started	Stopped	Source (S#)	Abatement Device (A#)	Emission Point (P#)	CEM	GLM	Fuel	Gas	Parameter	NOx	SO2	CO	H2S	TRS	NH3	O2	CO2	H2O	LTA	Orsat/	Lead	Steam Flow	Wind Dir.	Wind Speed	pH	Temp.	VOC	Gauge Press.
5/11/2018 7:00 AM	5/13/2018 6:57 PM	✓	S6051						✓																			✓
Discovered On: 5/14/2018 Event Description: This inoperative monitor is being submitted in an abundance of caution to meet any reporting obligations as the investigation is ongoing. The Alky Cooling Water Tower hydrocarbon analyzers (12A1400 & 12A11401) went inoperative on 5/11/2018 at 0700 Hours																												
5/17/2018 4:18 PM	5/19/2018 5:13 AM		S4060		✓				✓																			
Discovered On: 5/17/2018 Event Description: On Thursday May 17, 2018 at 1618 hours, F-210 NOx analyzer became inoperative. The analyzer came back online Saturday May 19, 2018 at 0513 hours.																												
5/27/2018 11:50 PM	5/29/2018 8:03 AM	✓	S4152		✓				✓																			
Discovered On: 5/28/2018 Event Description: F-100 NOx monitor became inoperative on May 27, 2018 at 2350 hours. The monitor was repaired and back in service on May 29, 2018 at 0803 hours.																												
5/28/2018 6:29 AM	5/29/2018 8:06 AM	✓	S4385		✓																							
Discovered On: 5/29/2018 Event Description: V-65 O2 analyzer failed calibration on May 28, 2018 at 0629 hours. The analyzer was successfully calibrated on May 29, 2018 at 0806 hours.																												
6/4/2018 11:32 AM	6/6/2018 1:46 PM	✓	S4171				✓																					
Discovered On: 6/5/2018 Event Description: F-355 fuel gas flow meter (62F355) became inoperative on June 4, 2018 at 1132 hours. The flow meter was repaired and back in service on June 6, 2018 at 1346 hours.																												
6/21/2018 4:16 AM	6/23/2018 9:51 AM	✓	S4171		✓																							
Discovered On: 6/22/2018 Event Description: This inoperative monitor is being submitted in an abundance of caution to meet any reporting obligations as the investigation is ongoing. F355 361 West O2 and CO analyzers became inoperative June 21st, 2018 at 0416 hours and resumed operation June 23, 2018 at 0951 hours. The O2 and CO analyzers passed calibration on the 21st, 22nd and 23rd.																												
6/24/2018 4:58 AM	6/26/2018 9:31 AM	✓	S4155		✓				✓																			
Discovered On: 6/26/2018 Event Description: On June 24, 2018 at 0458 hours, the NOx and O2 analyzers became inoperative. The analyzers came back online on June 26, 2018 at 0931 hours.																												

Certification Statement

I certify under penalty of law that based on the information and belief formed after reasonable inquiry, the statements and information in this document and in all attachments and other materials are true, accurate, and complete.

Signature of Responsible Official: Kory Judd Title: General Manager Richmond Refinery
 Date: 22 July 2018



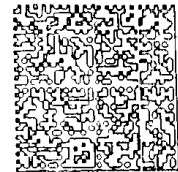
Richmond Refinery
Chevron Products Company
(a Chevron U.S.A. Inc. division)
841 Chevron Way
Richmond, CA 94801

PLACE STICKER AT TOP OF ENVELOPE TO THE RIGHT
OF THE RETURN ADDRESS. FOLD AT DOTTED LINE

CERTIFIED MAIL®

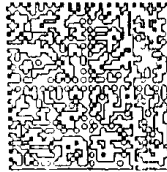


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BAY AREA AIR QUALITY
MANAGEMENT DISTRICT

Mr. Wayne Kino
Bay Area Air Quality Management District
375 Beale St, Suite 600
San Francisco, CA 94105

